

A brilliant recovery shapes up





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Foreword

Dear Colleagues:

The past two years have been like riding a roller coaster!

Following rocky conditions in 2020, the diamond industry proved to be brilliant and resilient, and delivered a spectacular showing in 2021. Every sector of the diamond industry performed very well in 2021 and emerged from the Covid-19-induced crisis well-positioned for future growth. In 2020–21, the diamond industry invested heavily in technology to gain operational efficiency, create marketing and consumer experiences that attracted buyers, and accelerate e-commerce schemes. Even smaller mom-and-pop retailers added online sales platforms to reach consumers who couldn't shop in person or travel due to government-instituted health measures.

And consumers were ready to spend. They were flush with cash from buoyant capital markets and economic stimulus programs, and eager to spend it on meaningful gifts for their loved ones (or rewards for themselves). Diamonds hit an emotional chord, which had been carefully cultivated by years of targeted marketing campaigns and storytelling. Diamond jewelry was also easier to access than other luxury and experience-based spending options.

Strong retail demand for diamond jewelry drove up prices and profit margins along the value chain. As rough diamond sales increased, miners increased production volumes and pulled from inventories to keep cutters and polishers busy. Healthy demand and price recovery for polished diamonds helped the midstream achieve decade-high margins.

In 2021, the industry had a renewed sense of value, which it answered through partnerships, consolidation, and technology. Now, every player along the value chain must add value—or remove hardship—on the path from mine to market.

What does the future look like? If we've learned anything this year, it's that we can always be surprised. Our experience and history point toward two possible scenarios over the short- to midterm, which we describe in this report—the 11th annual report on the diamond industry prepared by the Antwerp World Diamond Center (AWDC) and Bain & Company.

Read on for deeper discussion about the pandemic's effects, the industry's impressive recovery, and the possibilities ahead. It's our pleasure to prepare and share this insight with you every year. We hope you find it helpful and interesting, and we welcome further discussions about our research and the implications for your company.



Recent developments in the diamond industry

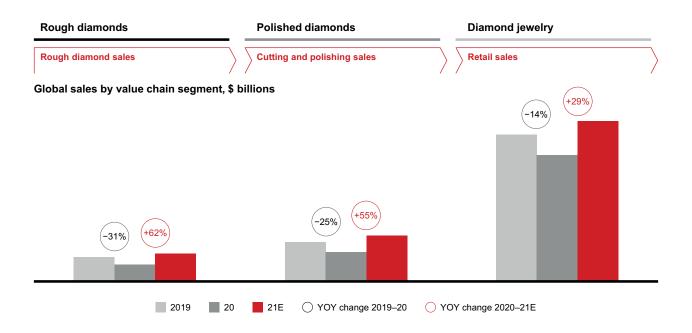
- The diamond industry experienced a spectacular reversal of fortune in 2021. In 2020, diamond jewelry sales fell 14% and rough diamond sales declined 31%. Luckily, industry revenues rebounded faster than expected and quickly exceeded 2019 levels. In 2021, revenue increased 62% in the diamond mining segment, 55% for cutting and polishing, and 29% for diamond jewelry retail—all rising above pre-pandemic levels (+13%, +16%, +11%, respectively). The trend was consistent with previous economic downturns, when the diamond industry recovered with high double-digit growth within 12 to 18 months after a crisis peak.
- Demand for diamonds was strong throughout 2021, especially in the second half of the year. The year started with a strong Chinese New Year season and Valentine's Day. In the second quarter, retailers placed orders earlier than usual to refill depleted inventories. Customers' urge for emotional gifting, increased savings, limited availability of experience-based substitutes, and restricted travel boosted diamond jewelry purchasing. Demand grew even higher during the second half of 2021 in preparation for the winter holiday season.
- ▶ Strong demand for diamond jewelry and depleted inventories translated into price growth. Cutting and polishing players in India relaunched production in the first and second quarters of 2021 and started actively buying rough diamonds. Robust consumer demand, depleted inventories, and strong balance sheets in the midstream contributed to higher demand for rough diamonds across the entire assortment range. Even previously underperforming small and near-gem quality diamonds sold well. Overall, in 2021, after a fall in 2019 and 2020 of 7% and 11%, respectively, rough diamond prices grew by 21%. Prices for polished diamonds, which declined by 3% and 5% in 2019 and 2020, respectively, increased only 9% year over year. By the end of 2021, both rough and polished prices were close to pre-pandemic levels and historic averages but still below their historic maximums (20% below for polished and 26% below for rough diamonds).
- Profit margins across the value chain quickly recovered to pre-pandemic levels. Upstream margins increased roughly 9–11 percentage points (p.p.), reaching 2018–19 levels. The midstream and retail segments both achieved decade-high profitability, growing 3–5 p.p. and 6–8 p.p., respectively. Combined, mining and retail players generated \$7 billion more profit in



2021 compared to 2020. This was a result of improved market conditions and operational excellence programs the industry undertook to combat lockdowns and competitive threats. The downstream also benefited from growth in more profitable regions, and an increase in online purchasing contributed to faster inventory turnover and lower operating costs.

- For the first time in several years, there was no shortage in diamond financing. With more liquidity, midstream players moved to cash sales and decreased their reliance on bank loans, reinvesting their profits into the business. Financial institutions, such as Guggenheim Partners, extended financing with confidence in the industry. Some larger traders shifted their focus, making finance provisioning one of their largest sources of income.
- Several trends continued on their pre-pandemic trajectories, namely, the divergence of lab-grown diamonds from natural-mined diamonds; emphasis on environmental, social, and governance (ESG) agendas; and beneficiation program development. Lab-grown diamonds continued to diverge into a separate, more affordable jewelry category. The segment saw continued demand growth and price decreases relative to natural-mined diamonds as lab-grown diamond supply increased and technologies advanced; the average polished lab-grown retail price declined to 30% and the average wholesale price to 14% of natural prices, down from 35% and 20% in 2020, respectively. ESG topics appeared on executive agendas across the value chain, with climate impact and origin transparency rising to the top. Both issues require cooperation between mining, cutting and polishing, and retail players. In 2021, African diamond-producing countries renewed beneficiation efforts. As more countries attempt to develop beneficiation programs, related cutting and polishing activities are expected to increase.
- ▶ Demand for diamond jewelry and polished and rough diamonds is expected to grow through the first half of 2022. The market expects a strong holiday season, strengthening consumer confidence in major markets, and limited supply of rough diamonds. In the medium term, demand for diamonds could be affected by government policies surrounding economic stimulus and consumer travel restrictions. Notwithstanding, in our base ("continued rebound") scenario, in 2022 the market is expected to demonstrate growth higher than the pre-pandemic period and return to historic growth pace by 2023–24. Industry players must continue to pursue operational excellence programs, invest in digital technologies, and advance marketing concepts and the diamond jewelry value proposition to prepare for potential changes in market conditions.

Figure 1: Across the value chain, revenues recovered in 2021 and exceeded pre-pandemic levels



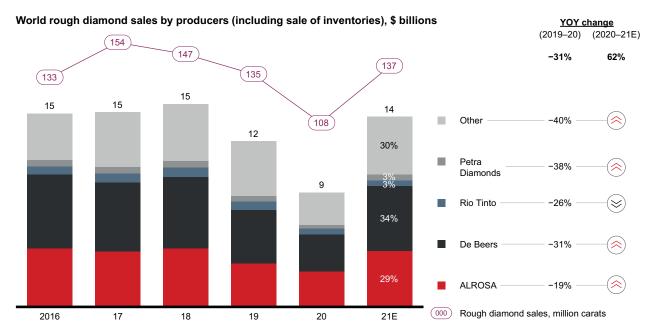
Notes here and after: E is estimated value throughout the report; YOY is average year-over-year change Sources: Kimberley Process; Gem & Jewellery Export Promotion Council; Euromonitor; publication analysis; company data; expert interviews; Bain & Company

Figure 2: Profit margins recovered in every segment. Combined, the mining and retail segments generated \$7 billion more in profit compared to 2020



Notes: Rectangle width illustratively corresponds to segment revenue in 2021E; analysis of rough diamond sales (upstream) segment is based on data for ALROSA, De Beers, Rio Tinto, and Petra Diamonds; margins for upstream are adjusted for impairment charges; analysis of large retail chains is based on data for LVMH (watch & jewelry segment), Signet, Chow Tai Fook, Chow Sang Sang, Luk Fook, and Titan Company; for the years 2019–20, prior to acquisition by LVMH, Tiffany & Co. is also included in the analysis Sources: Publication analysis; company data; expert interviews; Bain & Company

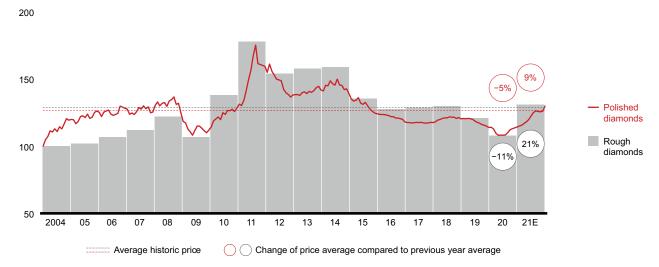
Figure 3: Rough diamond sales rebounded more than 60% in 2021, surpassing pre-pandemic levels



Notes: ALROSA revenues represent rough diamond sales only, including sales of stones purchased from Gokhran in Q2–Q3 2021; Petra Diamonds data converted from year ending in June to year ending in December, based on company reports for full year and half year; Rio Tinto and Arctic Canadian Diamond Company sales estimated assuming 60%/40% share in Diavik prior to November 2021 and Rio Tinto owning 100% of Diavik afterward; only diamonds tracked by Kimberley Process are included Sources: Company data; Kimberley Process; analyst reports; expert interviews; Bain & Company

Figure 4: Rough and polished prices reached the historic average in 2021 but lagged behind industry peaks

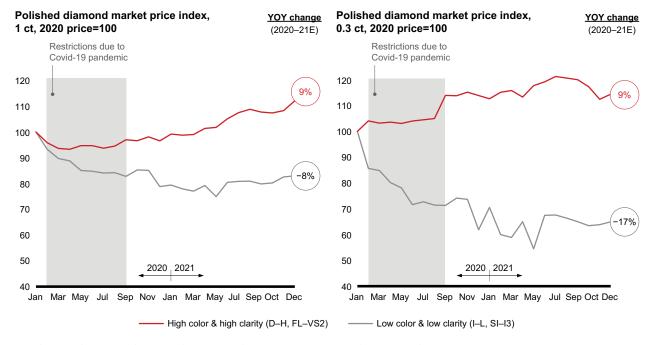
Rough diamond price index and polished diamond price index, 2004 price=100



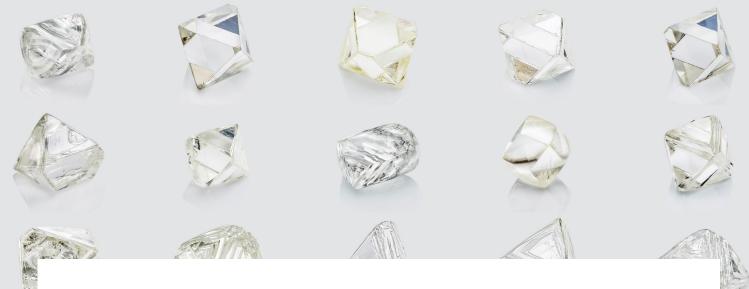
Notes: Market price index shows change in market price for like-for-like diamond categories weighted according to global rough and polished product mix; year-over-year price change reflects dynamics of average price for the 12 months of the current year compared to the average price for the 12 months of the previous year; average historic price reflects equally weighted average price over

2004–21 levels
Sources: Polishedprices.com; Roughprices.com; Hennig; UNI Diamonds; DPL; ODC sales report; company data; auction results; expert interviews; Bain & Company

Figure 5: Prices for higher-quality polished diamonds continue to outperform lower-quality diamonds



Note: YOY change reflects dynamics of average price for the 12 months of 2021 compared to the average price for the 12 months of 2020 Sources: UNI Diamonds; DPL; Bain & Company



Rough diamond production

- In 2020, rough diamond production continued its steady decline, falling to 111 million carats. Lower production was a direct result of the Covid-19 pandemic. Most companies reduced or suspended production during the first half of 2020, with some restrictions lasting more than six months. To support the market, major mining players adopted a price-over-volume strategy, reduced sales volumes, and amassed record-high inventories. Even though the market started to recover in the second half of 2020, rough sales volumes were 20% lower and rough prices were 11% lower, which translated to a 31% drop in rough diamond revenue.
- ▶ Supply started to rebound in 2021. Net production grew 5% and reached 116 million carats, still 20% below pre-Covid levels in 2019. A 16-million-carat supply increase was offset by an 11-million-carat loss from the closure of the Argyle mine in November 2020. The majority of growth came from Botswana, Canada, Russia, and South Africa. In Botswana, a 5-million-carat improvement came from De Beers treating higher-grade ore at Jwaneng. In Canada, production renewal at Ekati and Renard contributed an additional 4 million carats. ALROSA increased output by 2.5 million carats by treating higher-grade ore at Botuobinskaya, increasing ore processing volumes at Nyurbinskaya pipe and Udachny mine, and resuming production at Aikhal mine and Verkhne-Munskoe deposit. De Beers' South African production increased with the higher-grade ore from the final cut of the Venetia open pit.
- Proof to the sales increased 62% in 2021. Miners increased production volumes and pulled from inventories to satisfy strong demand from cutters and polishers. Rough prices increased as midstream companies rushed to restock to meet growing demand. At the end of 2021, upstream inventories hit historically low levels—about 29 million carats, which is close to average technical stock levels. As a result of robust sales, rising prices, and cost-cutting programs in the first half of 2021, mining companies saw 9–11 p.p. improvements in margins on average.
- The year 2021 was rich with mergers and acquisitions and joint venture activity. Rio Tinto acquired the remaining 40% share of Diavik, becoming its sole owner. Rio Tinto also formed a joint venture with Angolan ENDIAMA to explore Chiri kimberlite in the Lunda Sul region of Angola. Gem Diamonds sold Ghaghoo mine in Botswana to a joint venture between Botswana Diamonds and Vast Resources. Lucapa purchased the Australian Merlin mine. Visionary Victor

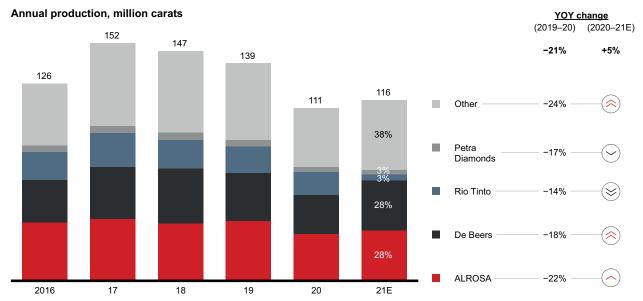


Resources purchased Firestone Diamonds' Botswana operations (primarily its BK11 mine, which has been on care and maintenance since 2012). Perth-based Burgundy Diamond Mines acquired Ellendale mine in Australia, which was mothballed in 2015 but could restart fancy yellow diamond production by late 2022.

- **ESG** agendas continued to gain importance among investors and consumers. For mining companies, one of the most prominent topics on the ESG agenda is carbon neutrality. De Beers committed to reach carbon neutrality (Scopes 1 & 2 greenhouse gas [GHG] emissions) by 2030, and ALROSA is designing its climate and environmental strategies to decarbonize its operations. Both companies are investing in promising technology that enables kimberlite to absorb carbon dioxide.
- Traceability is another priority for mining companies. In response, De Beers is launching a Code of Origin program supplemented by its Tracr platform, ALROSA is developing noninvasive laser marking technology, and many companies are partnering with third-party traceability solution providers. ALROSA, AGD Diamonds, and Lucara are working with Sarine to give buyers the ability to trace the origin of their diamonds.
- Production is expected to hit 120+ million carats in 2022 but is unlikely to reach pre-pandemic levels within the next five years. The largest short-term threat is new coronavirus strains (e.g., the omicron variant) that might disrupt production and logistics again. Major new projects have not been announced and investments in exploration are limited, so production growth will likely stay at 1% to 2% per year during the next half-decade. Promising demand growth and production scarcity support stability or further price growth for rough diamonds.

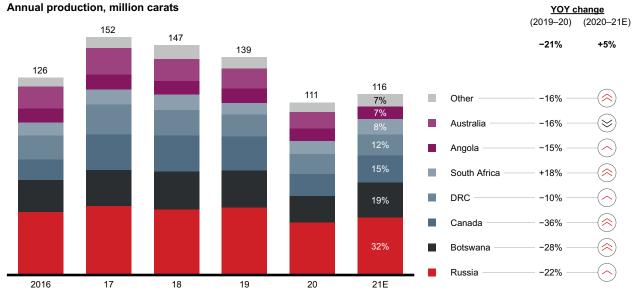


Figure 6: Production increased 5% in 2021 but is below pre-pandemic levels, limiting rough diamond supply



Notes: 2021 production is estimated based on companies' production plans; only diamonds tracked by Kimberley Process are included; 2021 data is a preliminary estimate and is to be updated with 2021 Kimberley data; Kimberley data for 2017–20 was adjusted: data for 2017–18 was adjusted in accordance with production of AGD Diamonds (an additional 1.4 million carats [Mcts] were accounted for in 2017 instead of 2018 to reflect reported real production of 4.4 Mcts instead of 3 Mcts); data for 2018 was adjusted in accordance with reported production of Debswana mines and Karowe mine (additional production of 0.1 Mcts for Botswana in 2018); data for 2019–20 was adjusted in accordance with reported production of ALROSA and AGD Diamonds (lower production by 1.9 Mcts in Russian Federation for 2019 and 2.5 Mcts in 2020) and with reported and estimated production of Galcho Kué, Viktor, Renard, Ekati, and Diavik (additional production of 3.1 Mcts in 2019 and 1.0 Mcts in 2020); Rio Tinto production estimated assuming 60% share in Diavik prior to November 2021 and 100% afterward Sources: Company data; Kimberley Process; expert interviews; publication analysis; Bain & Company

Figure 7: Australia was the only major diamond-producing country with a production decline in 2021, driven by the permanent closure of its only mine

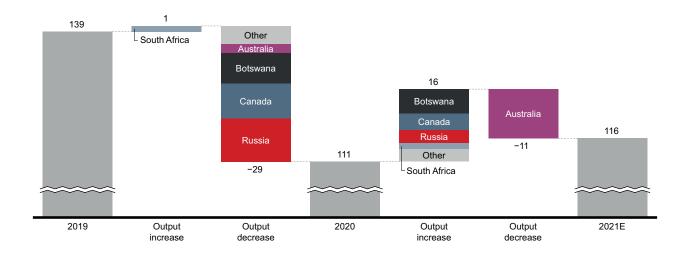


Notes: 2021 production is estimated based on companies' production plans; only diamonds tracked by Kimberley Process are included; 2021 data is a preliminary estimate and is to be updated with 2021 Kimberley data; Kimberley data for 2017–20 was adjusted: data for 2017–18 was adjusted in accordance with production of AGD Diamonds (an additional 1.4 million carats [Mcts] were accounted for in 2017 instead of 2018 to reflect reported real production of 4.4 Mcts instead of 3 Mcts); data for 2018 was adjusted in accordance with reported production of Debswana mines and Karowe mine (additional production of 0.1 Mcts for Botswana in 2018); data for 2019–20 was adjusted in accordance with reported production of ALROSA and AGD Diamonds (lower production by 1.9 Mcts in Russian Federation for 2019 and 2.5 Mcts in 2020) and with reported and estimated production of Gahcho Kué, Viktor, Renard, Ekati, and Diavik (additional production of 3.1 Mcts in 2019 and 1.0 Mcts in 2020); DRC is

Democratic Republic of the Congo
Sources: Company data; Kimberley Process; expert interviews; publication analysis; Bain & Company

Figure 8: Russia, Canada, and Botswana had the biggest production growth in 2021

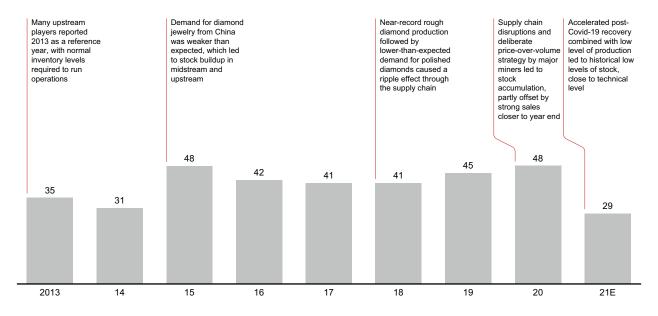
Annual production dynamics, million carats



Notes: 2021 production is estimated based on companies' production plans; only diamonds tracked by Kimberley Process are included; 2021 data is a preliminary estimate and is to be updated with 2021 Kimberley data; Kimberley data for 2019-20 was adjusted in accordance with reported production of ALROSA and AGD Diamonds (lower production by 1.9 Mcts in Russian Federation for 2019 and 2.5 Mcts in 2020) and with reported and estimated production of Gahcho Kué, Viktor, Renard, Ekati, and Diavik (additional production of 3.1 Mcts in 2019 and 1.0 Mcts in 2020) Sources: Company data; Kimberley Process; expert interviews; Bain & Company

Figure 9: Upstream inventories declined ~40%, driven by high demand and slow production recovery, and are near the minimal technical level

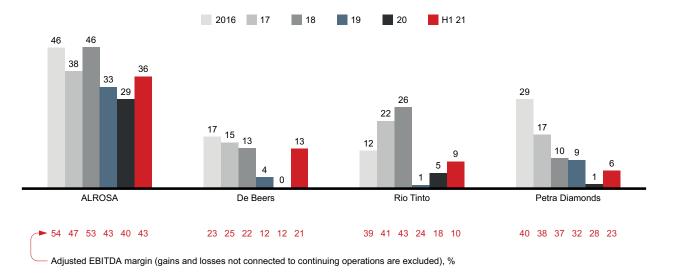
Accumulated inventory balance in upstream, million carats



Note: Inventory balance includes work-in-progress rough diamonds at the mining sites and the sales sights Sources: Company data; Kimberley Process; expert interviews; Bain & Company

Figure 10: Major players almost fully recovered profitability in 2021

Adjusted EBIT margin (gains and losses not connected to continuing operations are excluded), %



Notes: EBIT is earnings before interest and taxes; EBITDA is earnings before interest, taxes, depreciation, and amortization; ALROSA revenues include government grants; Rio Tinto revenues and EBIT include diamond mining only; Petra Diamonds data converted from year ending in June to year ending in December based on company reports for full year and reports for half year; Petra Diamonds results for H1 2021 do not include Williamson as the mine is classified as an asset held for sale for financial reporting purposes as of June 30, 2021 Sources: Company data; Bain & Company



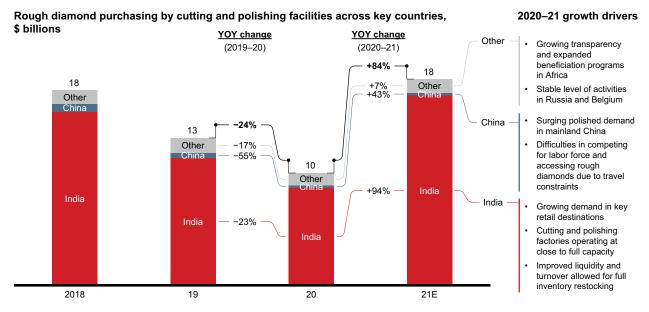
Cutting and polishing

- In 2020, cutting and polishing revenue fell 25%. Three factors contributed to the decline: disruption of the operations and logistics across the value chain, decline in jewelry sales due to lockdowns, and reduction in the prices of polished diamonds by 5%. A stronger-than-expected holiday season prompted early demand recovery and helped midstream players finish 2020 on a more positive trajectory. Despite the challenging start of the year, toward the end the midstream delevered excess inventory and improved profit margins 1–2 p.p. from 2019 levels.
- ▶ Healthy demand and polished price recovery turned 2021 into a lustrous year for the midstream and delivered decade-high margins. Demand was driven by swift economic recovery globally, increased interest in diamond jewelry in the US, as well as retail footprint expansion in smaller Chinese cities. Polished diamond sales rose 55%. The biggest winners were players with enough cash to buy rough diamonds at steep discounts (30% to 40%) between March and September 2020. Those companies had enough inventory for the market resurgence in 2021. Most of the rough diamonds bought in 2020 were sent to cutting and polishing centers in the beginning of 2021, building back the depleted rough stocks. As a result, rough diamond imports in India significantly surpassed rough diamond sales in 2021.
- In 2021, Indian cutters and polishers increased their net rough purchases by 94% to satisfy strong demand from retail. After severe lockdowns in 2020, India's factories reopened to replenish inventories and meet growing demand. A second wave of Covid-19 lockdowns temporarily decreased labor availability from April to June 2021. But the shortage was mitigated by vaccinations, migrants returning to work after seasonal kharif sowing, and social distancing measures.
- Chinese cutting and polishing activities grew 43% in 2021 but did not reach pre-pandemic levels. China's jewelry market recovered rapidly, driving an increase in imports of rough diamonds. However, labor shortages and difficulties in accessing rough diamonds due to travel constraints drove up the cost of manufacturing. Combined, those factors led to competitors from India taking even more market share from manufacturers in China.
- For the second year in a row, Antwerp increased its cutting and polishing activities to meet the demand for high-end goods. Labor costs and labor shortages remain a major barrier for growth.



- The year 2020 exacerbated the need for improved efficiency. Companies sought technologies to gain higher yields, increase manufacturing efficiency, lower labor costs, and enable traceability. Major players are also benefiting from dynamic pricing tools and the ability to customize offerings on their own digital platforms. Automatic cutting and polishing was a hot topic in 2021. Most advanced players are experimenting with Synova's DaVinci Diamond Factory, FENIX, Galahad Compass from Lexus/OctoNus, and OGI Solico machines. The tools have high costs and low technological maturity so far, so players with access to cheap labor are not expected to switch in the short term.
- Trends toward consolidation and removing intermediaries continued in the midstream segment. Major mining companies redistributed rough diamond sales allocations to the largest polished diamond manufacturers, integrated retailers, and major dealers of specific assortments, moving away from non-value-adding traders and dealers to minimize speculative sentiment. Online sales of polished diamonds via manufacturers' proprietary online platforms further reduced the need for intermediaries.
- Two other major trends continued to develop: beneficiation and mine-to-market partnerships. Beneficiation programs in Africa expanded successfully and improved transparency. Partnerships are becoming more popular as well. In 2021, wholesaler Samir Gems and jeweler Taché Company agreed to fund Meya Mining in exchange for rights to its products. Retailers also pursued midstream partnerships to get exclusive rights to special diamond cuts. New teaming efforts added to existing profit-sharing partnerships, such as those between Lucapa Diamond Company and Safdico International and between Lucara Diamond Corp. and HB Antwerp. These manufacturers are also teaming with high-end retailers, such as Graff Diamonds and LVMH.
- In 2022–23, we expect midstream performance will be largely influenced by diamond jewelry retail performance, expectations for continued growth in demand and consumer sentiment, and access to a limited supply of rough diamonds. Polished diamond top line is expected to follow retail sales dynamics, which in turn are influenced by physical retail footprint expansion and e-commerce development. Vaccine rollout and government economic responses will influence consumer sentiment. Regardless of the market situation, midstream players that have secured access to primary rough supply via partnerships or sightholder agreements and that invest in new technologies and optimize sales operations will benefit the most. It will be important to watch out for the direction in rough and polished prices. The gap between rough and polished prices will define overall midstream segment profitability, the effect of which we will see in full by mid-2022.

Figure 11: As Covid-19 restrictions eased, cutting and polishing activities surged 84% globally; India grew fastest at 94%

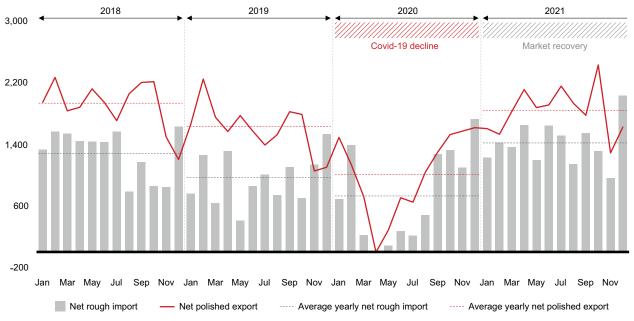


Notes: Data is assessed based on customs statistics of net import of rough diamonds, dynamics of number of workers in cutting and polishing hubs, and utilization of beneficiation programs in diamondproducing countries; statistics of secondary rough purchasing differs from primary rough diamond sales by miners due to variation in customs evaluation methods across countries and financing, shipping, sorting, preparing, and resale margins included in secondary sales value, as well as reimport of rough diamonds; Other includes Belgium, Botswana, Namibia, South Africa, Angola, Israel, and Russia; 2021 values are estimated based on 11 months of 2021 for India and for China, and on 9 months of 2021 for India and for China, and on 9 months of 2021 for India and For India, and on 9 months of 2021 for India and For India, and on 9 months of 2021 for India and For India, and on 9 months of 2021 for India and For India, and for China, and for Shina, and on 9 months of 2021 for India and For India, and For India,

of Statistics; Kimberley Process; expert interviews; Bain & Company

Figure 12: In India, net imports of rough diamonds increased 49% and net exports of polished diamonds rose 15% compared to 2019 pre-pandemic levels

Net import of rough diamonds in India and net export of polished diamonds from India, \$ millions



Sources: Gem & Jewellery Export Promotion Council; Bain & Company



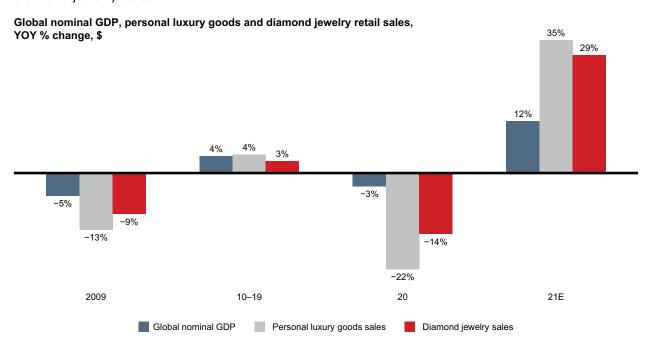
Diamond jewelry retail

- Diamond jewelry sales decreased 14% in 2020 because of store closures, wedding cancellations, and travel restrictions. In China, strong local consumption helped demand recover in the second half of the year. The US market started to recover in the third and fourth quarters. In China and the US, consumption declined 11%.
- In 2021, the personal luxury and diamond jewelry markets experienced decade-high growth (+35% and +29%, respectively). Diamond jewelry sales rebounded as Covid-19 restrictions relaxed and experience-spending opportunities remained low. Marketing and a resurgence of wedding demand also lifted sales. Coronavirus variants and new lockdowns dampened consumer optimism but were largely offset by vaccination rollouts in key diamond-consuming regions.
- In 2021, diamond jewelry retailers expanded their assortments to address a growing trend of sustainable jewelry. In addition to traceability programs, companies experimented with recycled and pre-owned jewelry. Tiffany & Co. launched a new product line made from recycled gold, and Signet released a collection of reclaimed gold and repurposed diamonds. Top retailers also adopted pre-owned jewelry sales through new lines and acquisitions. Blue Nile relaunched myGemma, a collection of pre-owned, high-quality engagement rings, and Kering purchased a 5% stake in Vestiaire Collective, an e-commerce platform for pre-owned luxury items.
- US retail fared best, with 38% growth in year-over-year diamond jewelry sales and 23% growth relative to 2019. Macro factors—including a substantial economic relief package (37% of GDP), unemployment rate reductions, a stock market surge (30%), and vaccinations—boosted consumer confidence and spending in 2021. Consumers had an emotional urge to spend the savings they accumulated in 2020, but experience-based gifting options were limited. The pandemic rapidly accelerated e-commerce, even for independent US retailers: 90% of jewelry retailers now have online platforms. Retailers optimized brick-and-mortar footprints by closing underperforming, mall-based stores and expanding off-mall locations that were less vulnerable to Covid-19 containment measures. The promotion of diamonds also increased a notch. Tiffany & Co. engaged Beyoncé and JAY-Z to star in its "About Love" campaign, and the movie House of Gucci featured a large diamond jewelry wardrobe.



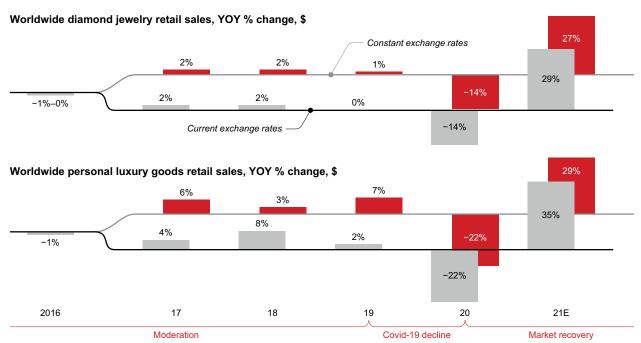
- level by 6%. China had the most successful vaccination program globally, vaccinating 85% of its population. Registered marriages increased 8% in 2021 but stayed below 2019 levels, leaving room for growth. The National 14th Five-Year Plan unleashed large spending potential in lower-tier cities and suburban areas. Retailers responded by adding physical stores in lower-tier cities and switching to corner-store formats in residential locations. Retailers also joined online marketplaces, such as Pinduoduo. Livestreamed sales on social networks, such as Weibo and TikTok, supported growth; jewelry accounted for 20% of livestream sales revenues. Online channels stimulated diamond sales in lower-tier areas with limited retail footprints. The largest retailers invested in "smart retail" projects, such as personalized jewelry design and instant online customer assistance, and optimized and automated their inventory distribution processes. Smart retail attracted more Gen Z customers, who are price-conscious and interested in sustainability. Special collections (e.g., Forever Young 88 and Guardian of Life by Chow Tai Fook) also targeted younger audiences and the solitaire market.
- In India, diamond jewelry sales rose 16% in 2021, following a 25% drop in 2020. Sales stayed 13% below 2019 levels, though. Competing dynamics defined the diamond jewelry demand in 2021. Lockdowns in the first half of 2021 and a reduced flow of travelers from Gulf countries restrained India's recovery. In the second half of 2021, the vaccination rollout reinvigorated consumer confidence. A 57% increase in weddings released pent-up demand for bridal jewelry. At the same time, festive jewelry suffered as two-thirds of major festival celebrations were canceled during lockdowns. Sales at mom-and-pop shops sharply declined due to customers' expectations for heightened safety measures and hallmarking compliance. National and regional organized retailers took the opportunity to expand into Tier-3 and Tier-4 cities, driving overall diamond retail.
- In Europe, diamond jewelry retail only partially recovered in 2021. It grew 18% but did not reach pre-pandemic levels, remaining 5% below 2019 retail sales. In the first half of 2021, easing Covid-19 restrictions supported the recovery. Europe's consumer confidence index grew 25%, indicating households' intentions to make major purchases. However, a new wave of lockdowns for unvaccinated people during the third quarter slowed the recovery, exacerbated by uneven vaccination rates (30% to 84%) across European countries. Reduced international tourism, especially from China, also affected the recovery.
- In the short term, downstream performance will depend on further economic growth perspectives and industry-specific factors, such as rebound of wedding celebrations with the ease of pandemic restrictions. New Year's, Valentine's Day, and Chinese New Year sales, as well as government responses to new waves of Covid-19, will set the tone for 2022.

Figure 13: In 2021, consumer discretionary spending increased, boosting personal luxury and diamond jewelry sales



Notes: Personal luxury goods includes luxury jewelry, watches, beauty goods, apparel, and accessories; personal luxury is converted from euros to dollars Sources: The Economist Intelligence Unit; Bain & Company Luxury Goods Worldwide Market Studies 2015–21; publication analysis; company data; expert interviews; Bain & Company

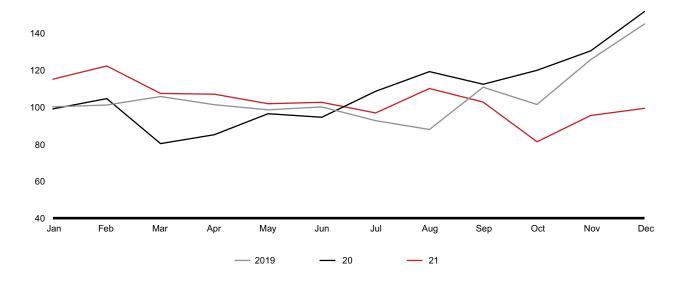
Figure 14: The global diamond market was materially impacted by the pandemic and economic downturn in 2020 but recovered at double-digit rates in 2021



Note: Constant exchange rates are shown in comparison with the previous year Sources: Bain & Company Luxury Goods Worldwide Market Studies 2015–21; Euromonitor; publication analysis; company data; expert interviews; Bain & Company

Figure 15: Online searches of diamond jewelry were higher than pre-pandemic levels throughout the first nine months of the year

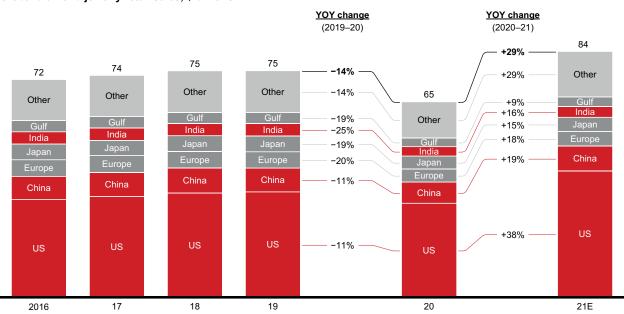
Popularity dynamics of "Diamond jewelry" searches in Google globally and in Baidu for China, 2019 January index=100



Sources: Google Trends; Baidu; Bain & Company

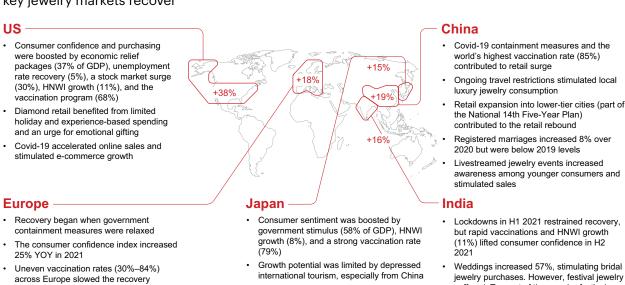
Figure 16: Despite the downturn in 2020, key markets grew dramatically in 2021 and exceeded 2019 results

Global diamond jewelry retail sales, \$ billions



Notes: China includes Hong Kong; Gulf includes Saudi Arabia, United Arab Emirates, Oman, Bahrain, and Qatar Sources: Publication analysis; Euromonitor; the Bureau of Economic Analysis of the US Department of Commerce; company data; National Bureau of Statistics of China; expert interviews; Bain & Company

Figure 17: Vaccination programs and restrictions on experience-based goods and services helped key jewelry markets recover



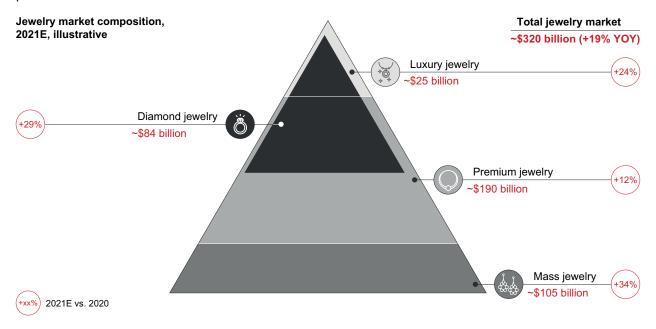
Notes: HNWI is high-net-worth individuals; China includes Hong Kong Sources: Publication analysis; company data; expert interviews; GlobalData; Bain & Company

Reduced international tourism, particularly

from China, limited the recovery potential

- jewelry purchases. However, festival jewelry suffered. Two out of three major festival celebrations were canceled due to lockdowns
- Purchasing in Tier 3-4 cities increased as the population shifted north to accommodate lockdowns and work-from-home policies
- The reduced flow of travelers from Gulf countries affected sales

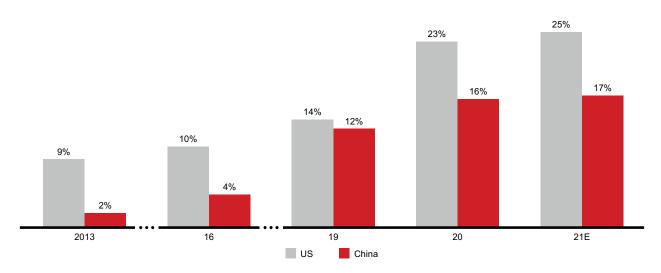
Figure 18: In 2021, diamond jewelry outpaced most other jewelry segments, thanks to strong performances in Asia and the US



Notes: Luxury jewelry is manufactured with precious metals by luxury brands and sold primarily in high-end department stores, fashion boutiques, and online; premium jewelry is manufactured with precious metals or gemstones and sold through department stores, fashion boutiques, brand retail stores, and online; mass jewelry refers to other jewelry, including costume jewelry; the size of each shaded area in the triangle corresponds to the estimated market size in 2021
Sources: Publication analysis; Euromonitor; company data; National Bureau of Statistics of China; expert interviews; Bain & Company Luxury Goods Worldwide Market Studies 2020–21; Bain & Company

Figure 19: In 2021, the share of e-commerce sales continued to grow in the US and China

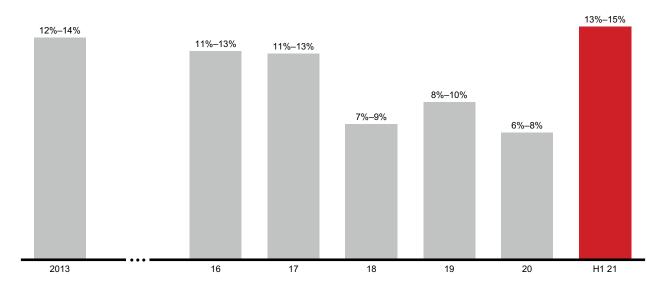
Share of online diamond jewelry sales in total diamond jewelry sales for leading retailers



Notes: 2021 online share is estimated based on nine months of 2021; leading retailers include Tiffany & Co., Signet, Blue Nile, Richemont (US), Chow Tai Fook, Luk Fook, Chow Sang Sang, and Richemont (China)
Sources: Company data; Bain & Company

Figure 20: Large retailers experienced multiyear-high EBIT margins in H1 2021

EBIT margins of large retailers



Notes: EBIT is earnings before interest and taxes; the year 2013 is taken as a reference year due to the fact that it had the highest operating margin in the decade; in H1 2021 EBIT margin is weighted on data for LVMH (watch & jewelry segment), Signet, Chow Tai Fook, Chow Sang Sang, Luk Fook, and Titan Company; for the years 2013–20, prior to acquisition by LVMH, Tiffany & Co. is also included in the analysis; in 2013, prior to acquisition by Signet, Zales is also included in the analysis Sources: Company data; Bain & Company



The diamond market is expected to be strong through the first half of 2022, supporting growth across all segments. Two possible scenarios then emerge: "continued rebound" and "short-term readjustment."

In the continued rebound scenario, the expectation is for the US and China to continue sustained growth momentum while other regions return to pre-pandemic levels, all supported by successful vaccination programs, limited lockdowns, and resumption of inter-regional travel. In this scenario, diamond jewelry sales are expected to continue to flourish, creating strong demand for polished stones. Continued growth in demand and limited supply of rough diamonds will benefit both miners and midstream players, supporting further strong price growth for polished and rough diamonds. Supply growth from the pre-owned jewelry market is also limited at least in the midterm: the initial retail mark-ups and pawnshops' discounts should be offset by a sharp diamond price increase and trusted valuation mechanisms should be established in order to induce a significant supply of recycled diamonds.

The short-term readjustment scenario implies a possible slight correction in diamond jewelry demand starting toward the end of 2022 and the beginning of 2023, with a gradual return to pre-pandemic trend levels and growth rates in 2024—similar to how the diamond market strongly rebounded and then readjusted to its historic trajectory during past recessions.

The most likely scenario is closer to a "continued growth across all segments" outcome since the industry is in a much better financial position than it was during previous recessions. Inventory levels of diamond jewelry and polished and rough diamonds are also among the lowest and healthiest the industry has seen in the past decade.

Longer-term market trajectories will be shaped by traditional industry factors: affordability, desirability, value chain efficiency, and the buying experience. Diamond affordability relies heavily on the pace of economic growth and consumers' disposable incomes. Desirability is reflected by the share of diamond jewelry sales within total jewelry and luxury consumption as well as cultural acceptance of diamond jewelry gifting. To achieve efficiency, the industry needs smooth inventory transition processes and price parity that allows all players along the value chain to earn sustainable profits that can be reinvested in marketing support and growth. The buying experience is shaped by access to diamond jewelry and omnichannel development.



- CEOs of businesses across the value chain are tackling an array of potential actions to position their businesses for long-term success. Diamond mining companies are investing in parcel consistency and technologies to enable efficient and effective online sales experiences in case of repeated disruptions in logistics. To address the growing desire for social impact, especially among younger consumers, mining companies are investing in various aspects of environmental and social issues, including traceability, transparency, and carbon neutrality. Midstream players are focused on efficiency, reviewing their business models to facilitate flexibility, introducing demand management practices, rightsourcing, and direct-to-customer sales channels. Consolidation and automation efforts are also on the agenda. Diamond jewelry retailers are seizing the momentum to rethink gifting occasions and the role of diamond jewelry. From functional and sensory to aesthetic and emotional appeal, marketing needs to harness more of the inspirational, self-actualization, and motivational elements of the value proposition for diamond jewelry. Another important aspect of creating a winning value proposition for consumers lies in enhancing the overall customer experience-from researching to buying to owning diamond jewelry-through product innovation, storytelling, and "wow" omnichannel engagement.
- In addition to individual company and brand actions, a coordinated and purposeful investment in diamond marketing is required for sustained long-term growth. Cross-value chain marketing efforts remain limited but are expected to grow. The Natural Diamond Council's 2022 budget is expected to increase 33% (from about \$80 million in 2021) following program expansion and the addition of new members. The drive to improve and expand diamond marketing has to continue as marketing investment in luxury products increases and becomes more creative. Diamond jewelry needs to keep pace to stay relevant and exciting for the next generation of consumers.

Figure 21: Several new drivers will influence the diamond market in the short- to midterm

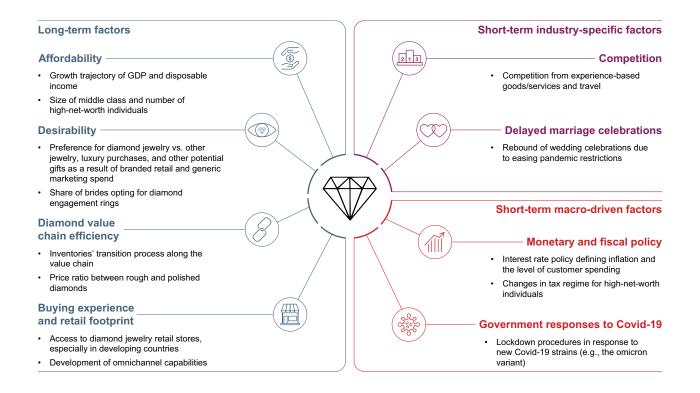
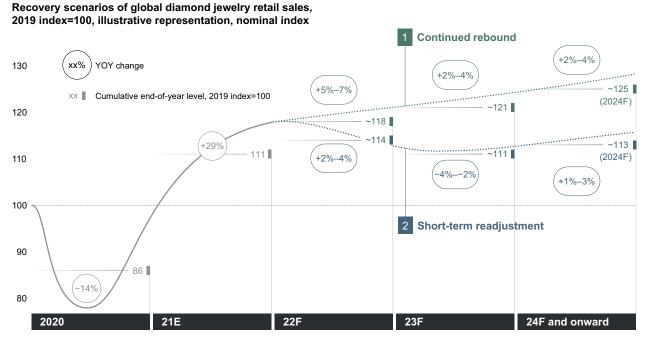
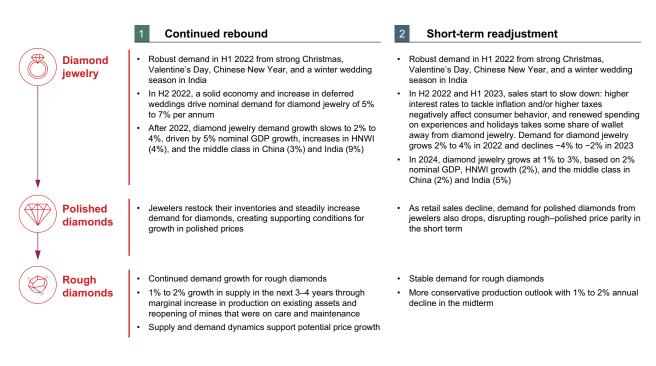


Figure 22: H1 2022 is expected to be strong; then two recovery scenarios are possible



Sources: The Economist Intelligence Unit; Euromonitor; OECD; company data; expert interviews; Bain & Company

Figure 23: Two potential scenarios for diamond demand across value chain



Sources: Expert interviews; Bain & Company

Figure 24: Players across the value chain should be prepared for short- and midterm market readjustments

Diamond jewelry retailers **Cutters** and polishers Diamond mining Expand "phygital" channels to minimize companies sales disruptions during lockdowns Increase flexibility by balancing insource Expand marketing to encourage more vs. outsource manufacturing, occasions and more diamond · Reduce reliance on physical sights in diversifying rough suppliers, and Short term applications (e.g., everyday accessories case of severe lockdowns and increas rebalancing trading vs. manufacturing like phone cases and hair clips) parcel consistency to enable "blind" sales activities based on rough-polished price Implement tactical marketing along the parity Optimize client portfolios to limit consumer journey to increase number of speculative behavior Switch from capacity-driven to demandtouch points with the consumer and and profit-driven purchasing models Implement data-driven analytics of rough support demand (e.g., product diamond fair sale price based on value of Limit operations through intermediaries placements, deals with influencers) polished diamond output via purchasing using direct contracts tenders, and sales through own or large Increase marketing efforts through third-party online platforms

Midterm

· Implement traceability programs to meet sustainability demands

partnerships across the pipeline to

support category demand

- Increase ESG efforts and adapt to new sustainability requirements (e.g. environmental footprint, health and safety, local community development)
- Introduce online sales sights with scanned 3D models and digital passports of the

Sources: Expert interviews; Bain & Company

Partner with miners and retailers to ensure rough diamond access and share margins

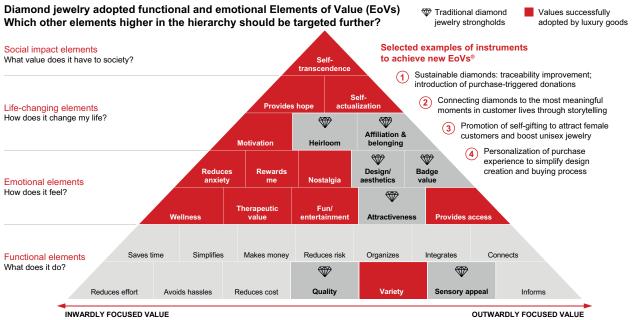
- Consolidate horizontally to increase access to rough supply and financing; optimize costs to become more resilient to rough-polished price divergence
- Automate cutting and polishing across all stone sizes to optimize costs and yields

Personalize digital shopping experiences and shorten the click-to-customer cycle

- (e.g., VR fittings, design creation) Expand storytelling to be more emotional and inspirational
- Build an ethical image to attract younger buyers and gain premium status/pricing on traceable diamonds
- Tailor jewelry designs and promotion to meet the needs of diverse consumer aroups

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Figure 25: To sustain demand, diamond jewelry marketing must capture more Elements of Value®



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Sources: Almquist, E., Senior, J., Block, N. (2016). The elements of value: measuring-and delivering- what consumers really want. Harvard business review: HBR, Vol. 94.2016, 9, p. 47-53; expert interviews; Bain & Company



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AWDC is a public-private partnership, officially representing and coordinating the Antwerp diamond industry. Its mission is twofold: to reinforce Antwerp's position as the world's leading diamond trade center and promote the image of diamonds to a general audience. AWDC does this through Diamond Office, where AWDC streamlines the vast import and export flow of diamonds in and out of Antwerp, and through a wide variety of dedicated marketing campaigns, services, conferences, trade fairs, economic missions and much more. AWDC's goal is to service all those involved or interested in our fascinating stones, from professional players like the mining giants to the bride-to-be looking for her perfect wedding ring.

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