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THE POWER OF INSIGHT

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DIAMOND INDUSTRY OVERVIEW:

What is the Future for the "Tears of the Gods"?

- Aside from perhaps gold, no other hard asset maintains such a high emotional appeal as diamonds.
- The diamond market is akin to an oligopoly with De Beers, ALROSA, and Rio Tinto combining for 66% of global production in 2014. Additionally, three countries were responsible for 59% of production in 2014.
- 125 million carats worth $14.5 billion USD were produced in 2014. ALROSA forecasts a supply CAGR of 1% between 2015 and 2024 and a demand CAGR of 5% to 2024 driven by emerging markets such as China and India and supportive demand from the United States.
- Aside from a global economic slowdown, the production of synthetic diamonds is arguably the biggest long term threat to the natural diamond business. Approximately 3.5 million carats of synthetic diamonds were produced last year.
- With no major diamond discoveries since 2004 (Rio Tinto's Bunder in India), having "the goods", a high quality and long lived deposit, ought to place any incumbent favorably amongst the major diamond producers.

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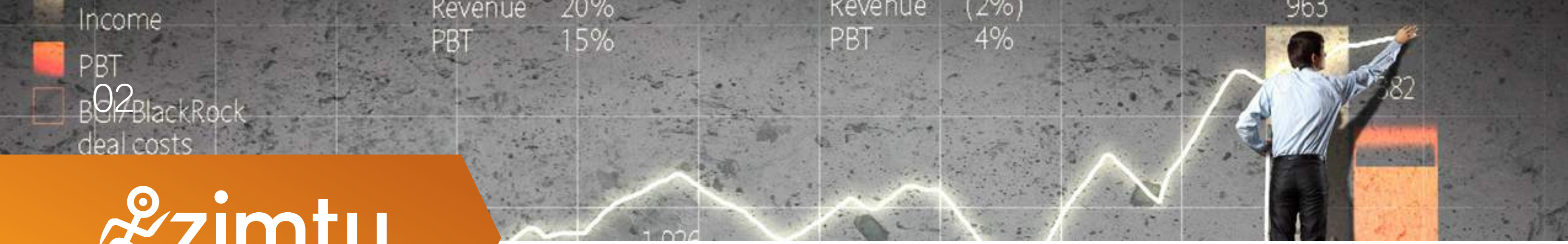

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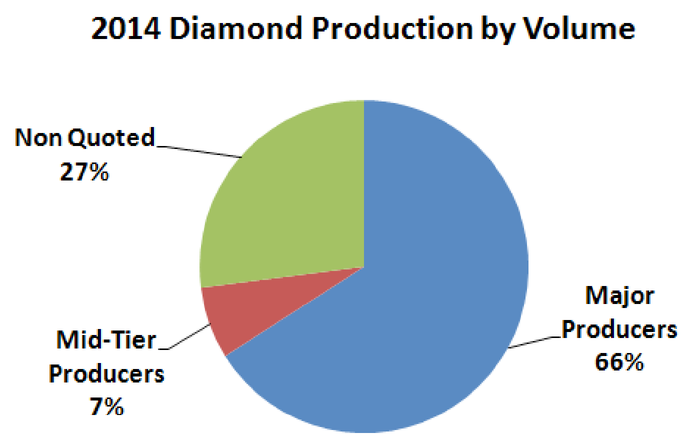
INTRODUCTION

PERHAPS NO OTHER COMMODITY BESIDES GOLD HAS SUCH A STRONG EMOTIONAL APPEAL AS DIAMONDS. ADDITIONALLY, PERHAPS NO OTHER COMMODITY IS AS SHROUDED IN MYSTERY AS ARE DIAMONDS, THOUGH THIS HAS CHANGED IN RECENT YEARS OWING TO A HOST OF FACTORS. DESPITE THE PERPETUAL APPEAL OF THESE "TEARS OF THE GODS", THE INDUSTRY IS STILL SUBJECT TO LAWS OF SUPPLY AND DEMAND UNDERPINNED BY CONSUMER TASTES AND PREFERENCES.

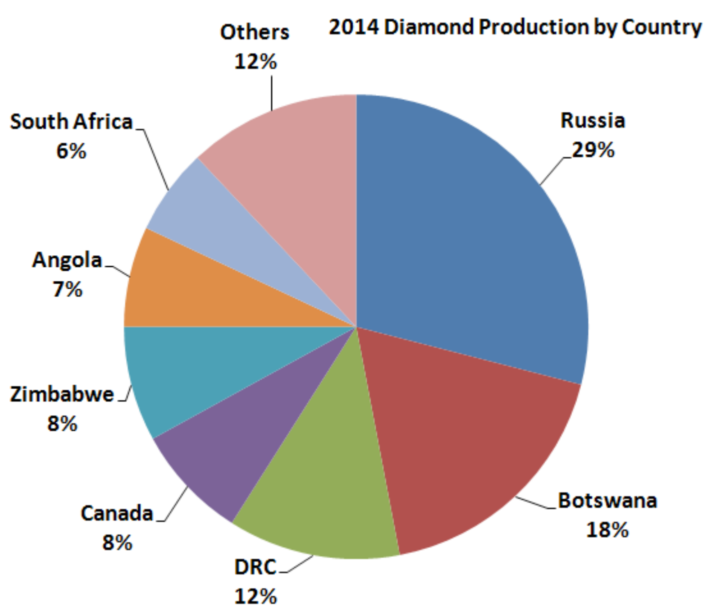
Though there is some vertical integration in the diamond business, it generally remains dispersed amongst explorers, producers, polishers, and retail outlets who generally, but not always, focus on their specific niche. While the mining segment of this industry produced approximately 125 million carats of rough diamonds in 2014 worth USD $14.5 billion, the entire industry is estimated to be USD $80 billion per year in size. For the sake of perspective, the all time high in production was 176 million carats in 2005 leading some to believe we've hit "peak" diamonds.

The diamond mining business can loosely be thought of as an oligopoly with De Beers, which AngloAmerican (AAL: LON) owns 85% of, AK ALROSA PAO (ALRS:MCX), and Rio Tinto (RIO:LON) as the "big three" with several Mid-tier producers including Petra Diamonds (PDL:LON), Lucara Diamonds (LUC:TSX), Dominion Diamond Corp (DDC:NYSE), and Gem Diamonds (GEMD:LON) contributing the remainder of supply alongside various privately held entities.



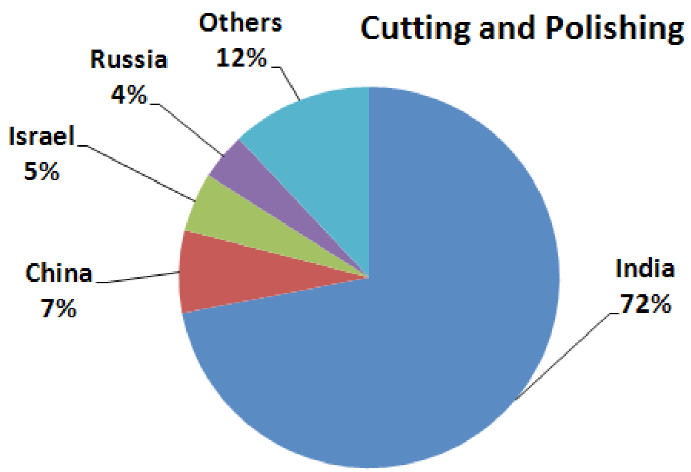
Source: Company Documents, Kimberley Process Statistics

Diamond production is also reasonably geographically concentrated with 59% of supply originating in three countries:



Source: Company Documents, Kimberly Process Statistics

The cutting and polishing segment of the diamond value chain is concentrated in India but is extraordinarily diverse with thousands of companies and multiple business models catering to a diverse client base, according to De Beers.



Source: ALROSA

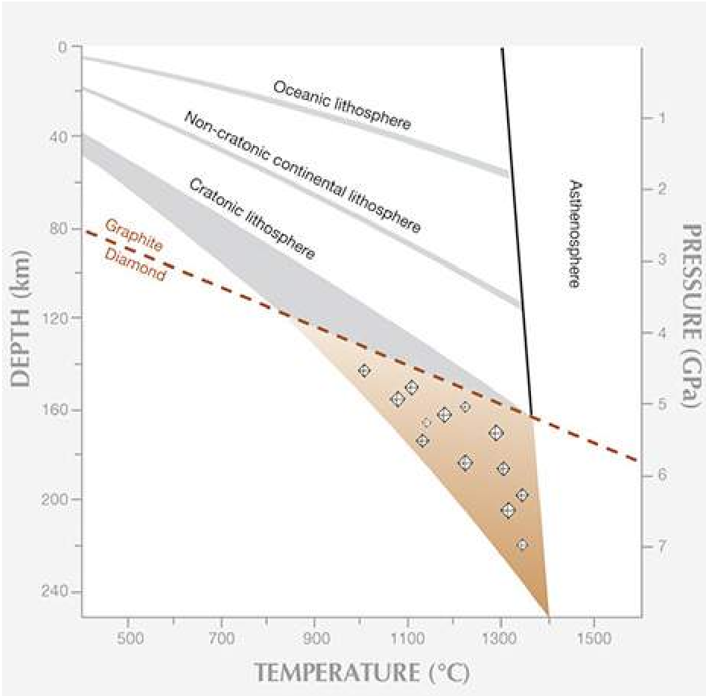
Given that mining costs are increasing owing to the fact that producers must "dig deeper" in existing mines, it is anticipated that the cost inflation here will filter throughout the value chain in the coming years. This will also pressure "middle market" margins and require this segment of the market to search for unique financing strategies to function properly.

Finally, despite the relatively small size of the global diamond market, the importance of diamond mining to the long term health of certain economies cannot be understated. As an example, Botswana, with a GDP of $14.78 billion counts diamond production by value as 26% of its GDP (2013).

No other commodity besides gold has such a strong emotional appeal as diamonds.

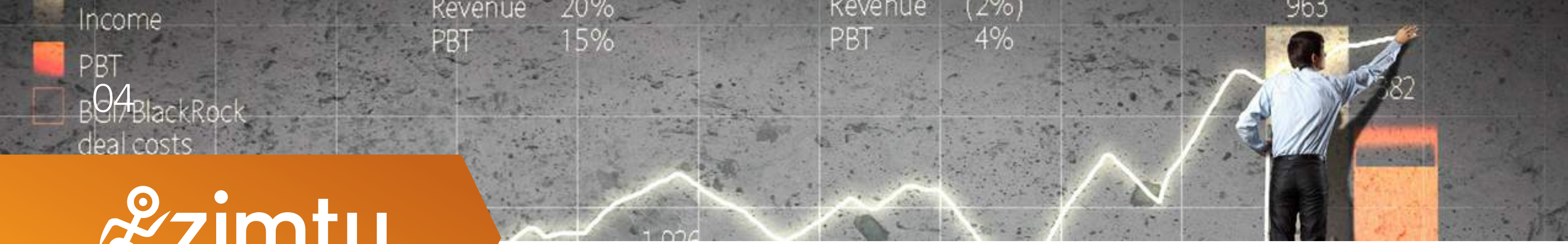
GEOLOGY

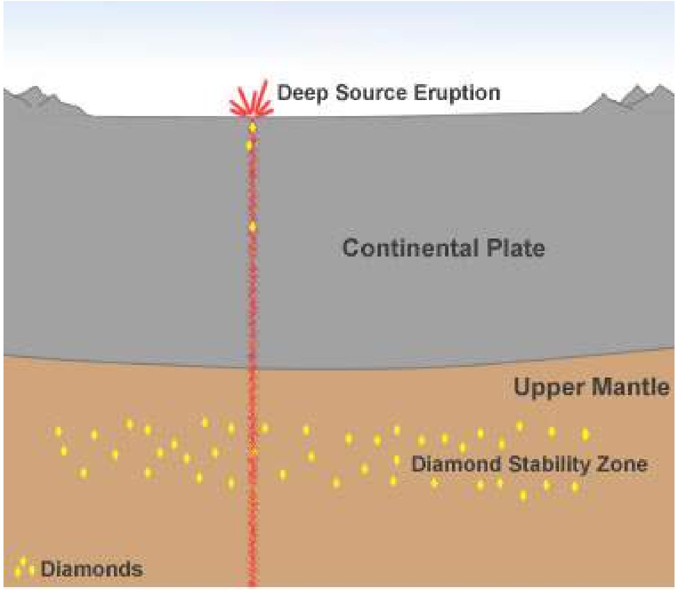
Diamonds are typically formed deep in the Earth's crust (at approximately 250 km depth) under Archean cratons. The extreme pressure at this depth, coupled with temperatures in the range of 900 to 1,200 degrees centigrade, provides the ideal environment for diamond formation.



Source: gia.edu

Volcanic activity serves as the conduit by which diamonds emerge on or near the surface of the Earth. The entire process is believed to take from 1 billion to 3 billion years and as the magma which acts as the transport mechanism for the diamonds cools, it forms an igneous rock known as a kimberlite. Other types of magma which can host diamonds are lamproite and lamprophyre. More broadly, "kimberlite" refers to a kimberlite "pipe" or a vertical igneous structure which is known to host diamonds. Kimberlite became part of the popular lexicon during a diamond staking rush in South Africa in the 1860s.





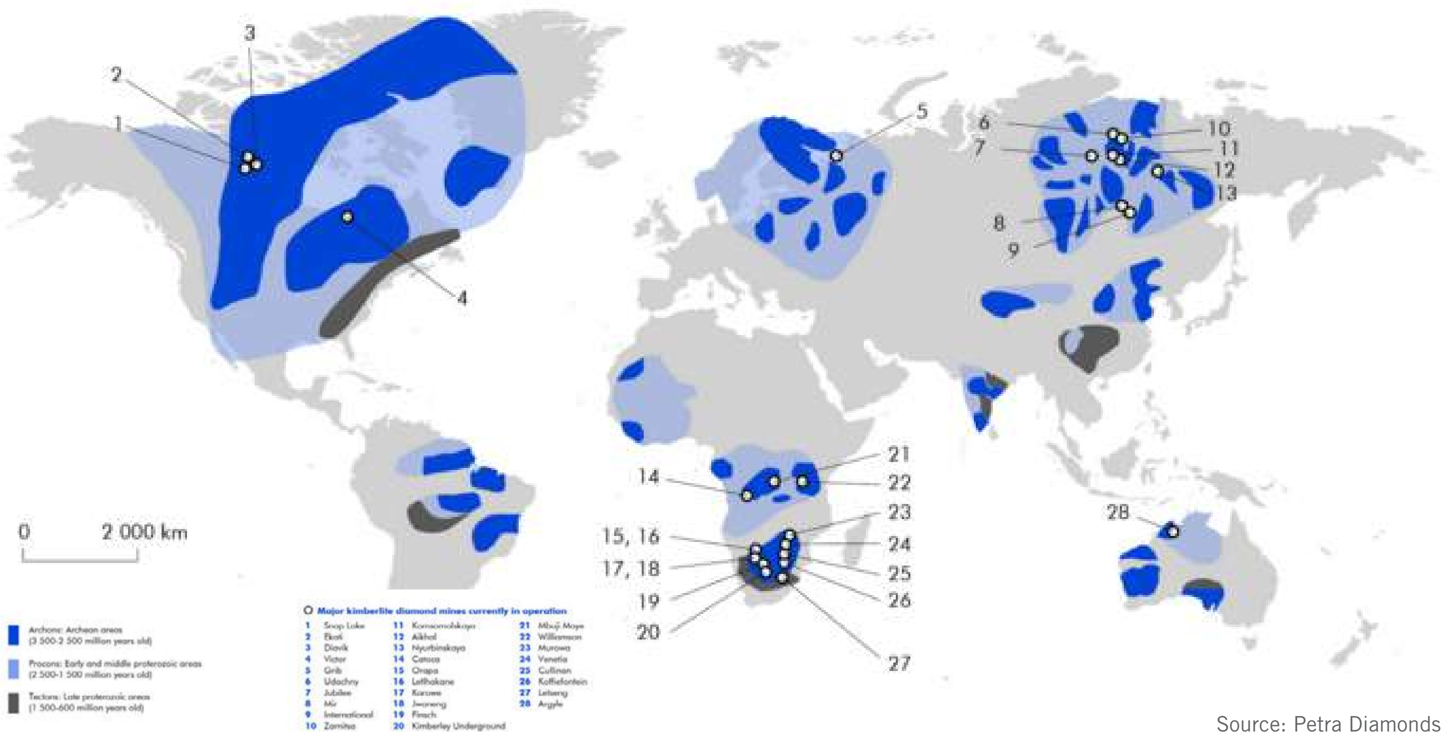
Source: Geology.com

A schematic of the kimberlite diamond mines in existence today is shown below:

As you can see, the most prolific of the world's diamond mines are located in Russia, Southern Africa, and Canada though exploration occurs in many other parts of the world.

SUPPLY, DEMAND, AND PRICING

As demand for natural diamonds is based primarily on lifestyle choices (engagements, anniversaries), the demand trends ought to be reasonably predictable and track GDP and personal income growth. The main engine of demand will come from emerging markets in the coming years supported by steady demand from western economies. The International Monetary Fund forecasts GDP growth in advanced economies for 2015 and 2016 at 2% and 2.2%. Developing economies are forecast to grow at a rate of 4% and 4.5% in 2015 and 2016. Though this forecast is short term, it does validate the idea that despite the global slowdown, the developing world will lead global growth prospects and diamond demand along with it.



Source: Petra Diamonds

Deposit Name	Owner(s)	Year of Discovery	Country	Status	Est. First Production	Avg Annual Production (Mcts)
Grib	Lukoil Oil Company	1997	Russia	Development	2014	4
Botuobinskaya	ALROSA	1994	Russia	Development	2015	2
Karpinsky-1	ALROSA	1982	Russia	Development	2015	1
Gahcho Kue	De Beers/Mountain Province	1995	Canada	Permitting	2016	5
Renard	Stornoway/Newmont	2001	Canada	Permitting	2017	2
Star-Orion South	Shore Gold	1988	Canada	Feasibility	2017+	2
Bunder	Rio Tinto	2004	India	Pre-feasibility	2017+	2
Ghaghoo	Gem Diamonds	1981	Botswana	Construction	2014	0.4

Source: DeBeers; Data as of May 2014

A current threat to diamond demand growth concerns China. As Chinese authorities have cracked down on corruption and ostentatious shows of wealth, diamond demand has moderated. Watching this dynamic closely will be key to accurate forecasting. The damage is already apparent in financial earnings reports released by publicly traded diamond producers. As an example, Dominion Diamond recently reported a 31% decrease in sales in volume terms and a 25% decrease in the average price per carat during the third quarter. The blame was placed on slower than anticipated Chinese demand. Other producers have voiced similar sentiments.

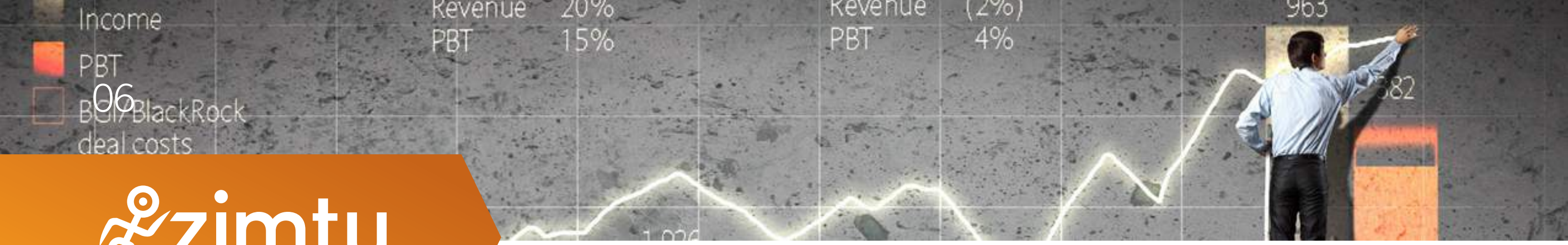
Nonetheless, ALROSA has offered a view of the diamond market to 2024, with supply forecast to increase by a CAGR of 1% between 2015 and 2024, with a 3% CAGR to 2019 due to increased production from mines in Russia, Australia, and Canada and a 2% decline in production from 2019 to 2024 due to mine depletions in Australia and Canada. This generally flat production profile is contrasted with a forecast 5% demand CAGR between 2015 and 2024.

One's view of the diamond market should take into account current and looming supply on the market. With the market balanced currently, we find it interesting to note that diamond exploration spending today is approximately half of what it was in 2007, then approximately $1B. According to De Beers, $7 billion has been spent on diamond exploration since 2000. Given the forecast decrease in production commencing around 2019, the dearth of exploration funding and long lead times necessary to build new mines dictate that higher diamond prices may loom in the future.

According to De Beers, here is the pipeline of diamond projects, forecast to add over 18 M carats of supply to the market in the coming years.

The twin headwinds of excess supply and muted demand show up in the diamond price in 2015, down approximately 19%.

As is the case with many other commodities, those diamond deposits with the lowest cost of production can survive and thrive in the current pricing environment. Gem quality diamonds command a premium price and so those deposits which can demonstrate superior economics based on a long mine life of gem quality stones hold out the potential



for positive returns. Obviously, lower diamond prices will affect all parts of the supply chain and this must factor into your capital allocation decision.

SWOT ANALYSIS

While SWOT analyses can be valuable, they can also be slightly dangerous as one individual may see a strength as a weakness and vice versa. Nonetheless, we include a brief analysis of the diamond industry:

Lower diamond prices will affect all parts of the supply chain and this must factor into your capital allocation decision.

Strengths	Weaknesses
• Longstanding emotional appeal • Well developed industry and supply chain • Demand growth in line with global GDP and personal income growth	• Lack of pricing transparency • Current excess supply • Lack of avenues of demand
Opportunities	**Threats**
• Lack of new discoveries • Rising living standards in Emerging Markets • Social awareness	• Synthetic diamonds • Resource nationalism • Crackdown in China on excessive consumption • Rising mining costs • Stagnant economic growth

INDUSTRY PARTICIPANTS

As is the case with any commodity, the diamond industry maintains its own value chain with diamond exploration/developers, diamond producers, wholesalers, polishers, and commercial outlets each playing their own role. A search we conducted on Bloomberg showed over 200 distinct deposits owned by numerous diamond mining and exploration plays

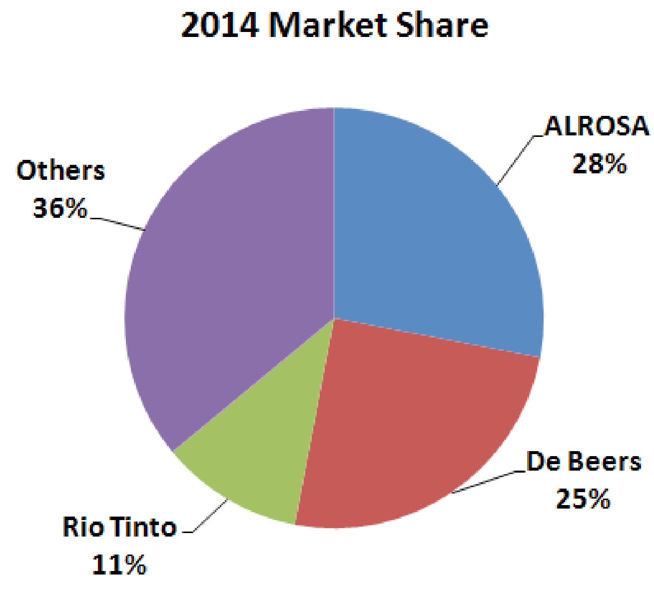
Select diamond producers with most recent six months results:

Company	Ticker	Market Cap	Carats Produced	EBITDA	EBITDA/Carat
De Beers	N/A	N/A	15,628,000	792,000,000	£50.68
ALROSA	ALRS	371.93 B RUB	18,000,000	70,500,000,000	3,916.67
Rio Tinto	RIO	37.71 B GBP	8,851,000	413,000,000	$46.66
Petra Diamonds	PDL	339.03 M GBP	1,601,069	214,800,000	$134.16
Lucara Diamonds	LUC	820.27 M CAD	175,791	28,400,000	$161.56
Dominion Diamonds	DDC	706.39 M USD	3,183,000	121,200,000	$38.08
Gem Diamonds	GEMD	142.38 M GBP	85,302	46,100,000	£540.43

Data as of Dec 7, 2015; Source: Bloomberg, Company Documents around the world. This may seem like a lot, but given the slim margin for success in the diamond business, the steady demand, and the need for existing producers to "replace mined carats", this seems about right.

While diamond prices have been under pressure recently, this obviously lays bare the need to consider multiple parts of the value chain when deploying capital as low prices will affect different parts of the value chain more than others. As is the case with any capital allocation decision, the balance between risk and return is crucial. Here is an abbreviated list of the diamond industry producers and developers.

As De Beers is not a publicly traded entity, determining a valuation is a challenging exercise. Nonetheless, the recent struggles faced by Anglo American, who owns 85% of the company, have laid bare the possibility of monetizing its stake in De Beers through an IPO or other means. A recent article from Bloomberg quoted an HSBC analysis which calculates Anglo's stake in De Beers at $10 billion meaning a full market value of De Beers would be just under $12 billion.

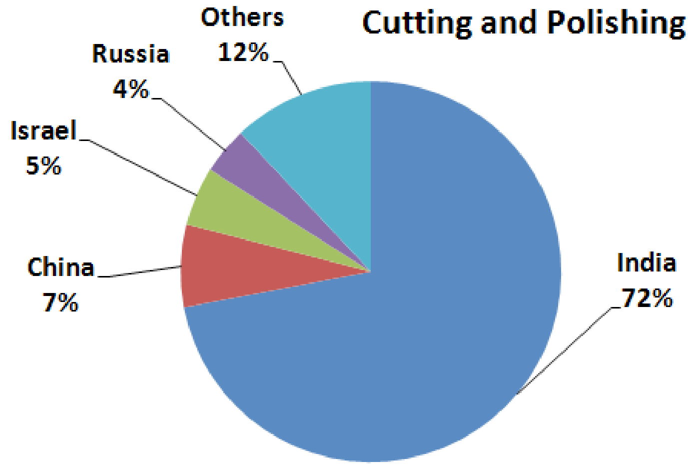


Select exploration and development companies:

	Ticker	Market Cap
Arctic Star Exploration	ADD	1,300,000 CAD
Dunnedin Ventures	DVI	2,350,000 CAD
Tango Mining	TGV	1,530,000 CAD
Firestone Diamonds	FDI	51,420,000 GBP
Kennady Diamonds	KDI	128,530,000 CAD
Shore Gold	SGF	51,830,000 CAD
Peregrine Diamonds	PGD	40,990,000 CAD
Mountain Province	MPV	429,050,000 USD
Stornoway Diamonds	SWY	549,230,000 CAD

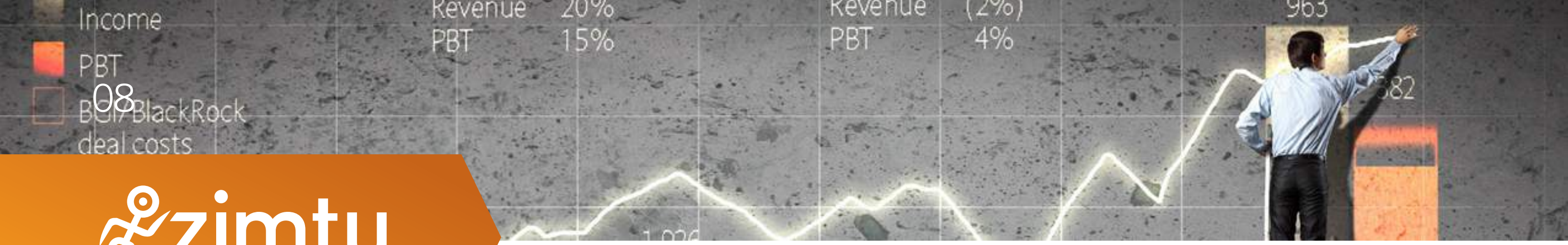
Data as of Dec 7, 2015; Source: Bloomberg, Company Documents

There also exists an entire cutting and polishing industry mentioned earlier in this report. The breakdown globally:



Source: ALROSA

The final piece of the diamond value chain is the retail sector and includes dozens of names including Tiffany & Co (TIF:NYSE) however a more extensive list is out of the scope of this report as hundreds of retail outlets exist to satisfy varied customer tastes. Much of the $80 billion valuation of the diamond industry exists here.



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CONCLUSION

Diamonds aren't immune from the forces of supply and demand, but the asset class does stand out somewhat relative to other commodities with respect to its emotional appeal. While the major producers are under pricing pressure due to slack demand, this may not always be the case and therein exists an opportunity along the diamond supply chain. Additionally, mining costs are on the increase generally which means that new diamond mines may not come online as expected. As demand for gem quality diamonds remains steady over the next several years, a lack of funding for exploration to replace mined carats is supportive of higher prices.

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In the current pricing environment for diamonds, prudence dictates that one should focus only on what they can control. For this reason, lowest production cost or finding costs arguably offer the best value in the diamond space until prices recover. Put another way, those explorers or producers with "the goods", high quality long-lived deposits, will be well positioned to benefit from any future turnaround in the diamond market.

SELECT SOURCES

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