



Valuation and Modelling of Diamond Values & Diamond Price Forecast

Neil Buxton

WW International Diamond
Consultants Ltd.

Toronto, March 2008

neil@diamondwww.com

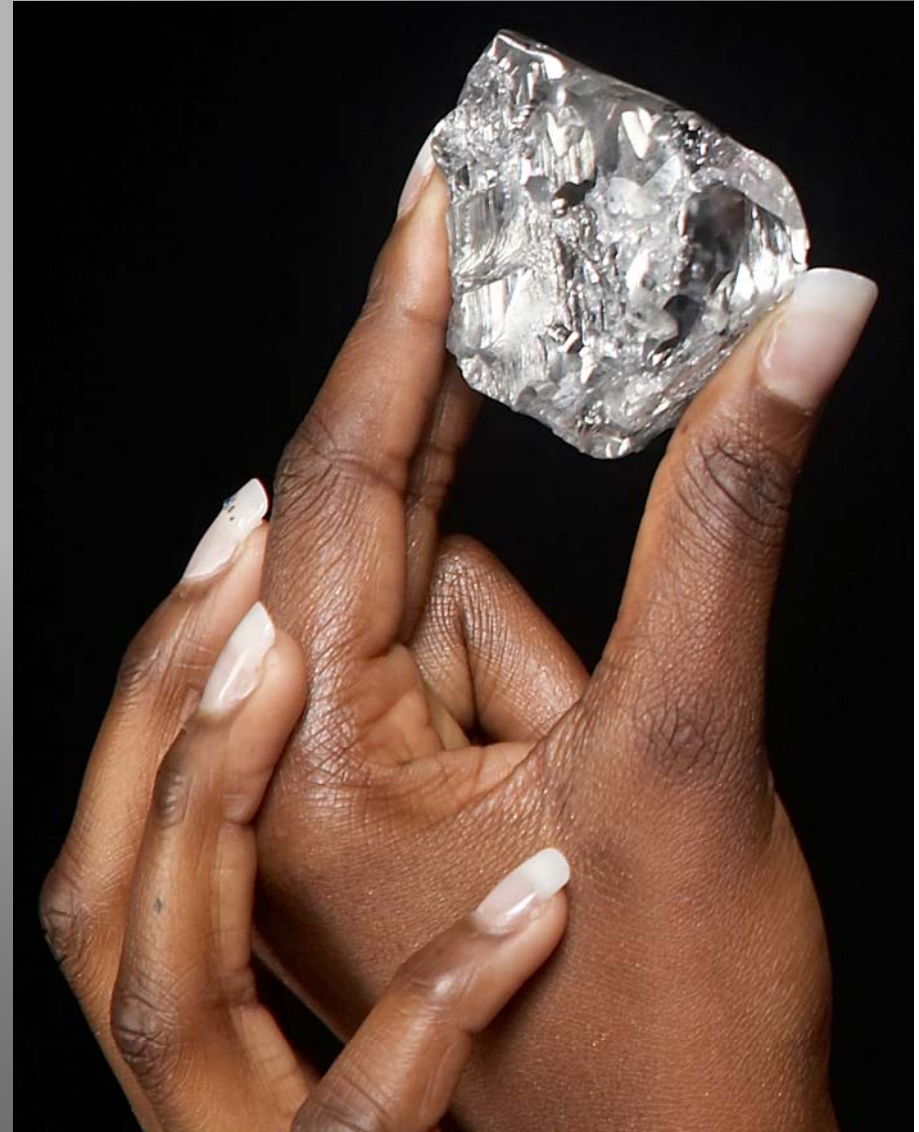
www.diamondwww.com



Diamonds are Different

Question:

In a diamond mine or sample, when would an increase in the average price (\$ per carat) have a negative impact on the economics?



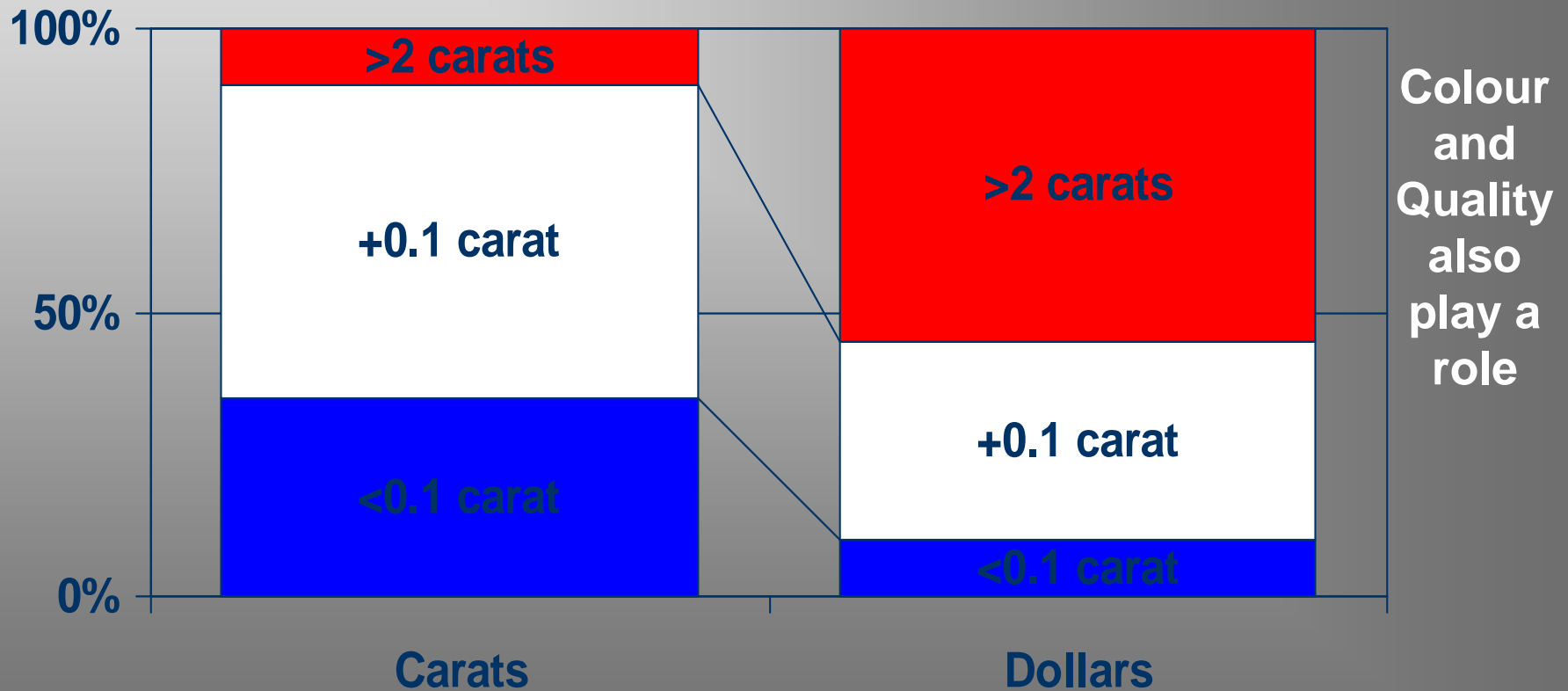


Valuation and Modelling of Bulk Samples

- Ashton
- Brazilian Diamonds
- Contact Diamonds
- DiamonEx
- Diavik
- Falconbridge
- Gem Diamonds
- Gope Exploration
- Kensington
- Tahera
- Snap Lake
- Shore Gold
- Peregrine Diamonds



A Carat and Value Profile



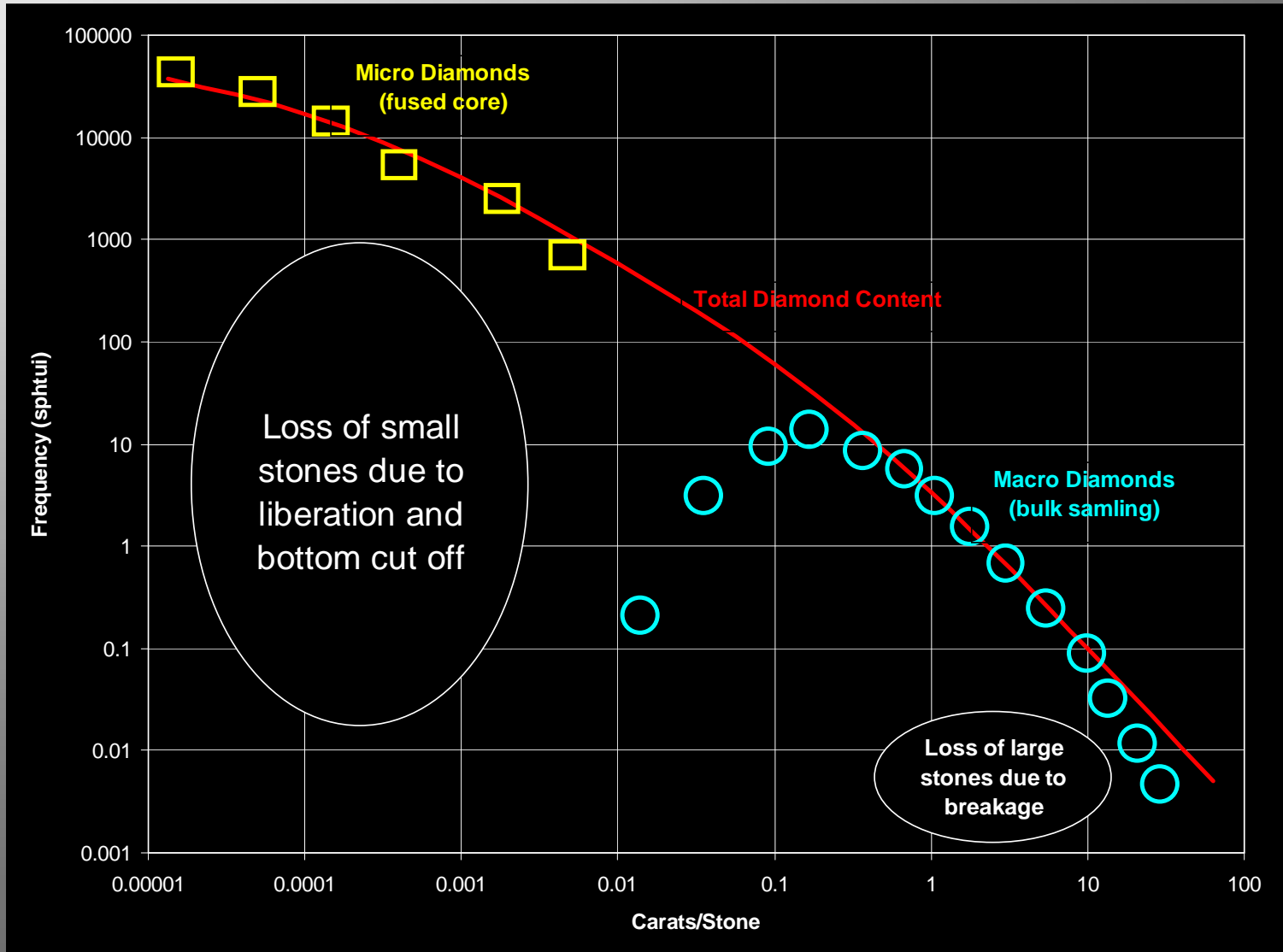


Stages of Diamond Sampling

| | | |
|--------------------|-----------|---|
| Indicator Minerals | | Indicates diamond potential |
| Initial Sampling | 200 kg | Micro diamonds recovered to indicate grade (crts/tonne) |
| Mini Bulk Sample | 200 cts | Confirm macro grade (crts/tonne) Initial value estimate (\$/crt) |
| Bulk Sample | 2000+ cts | Confirm value estimate (\$/crt) |



Micro-Macro Relationship





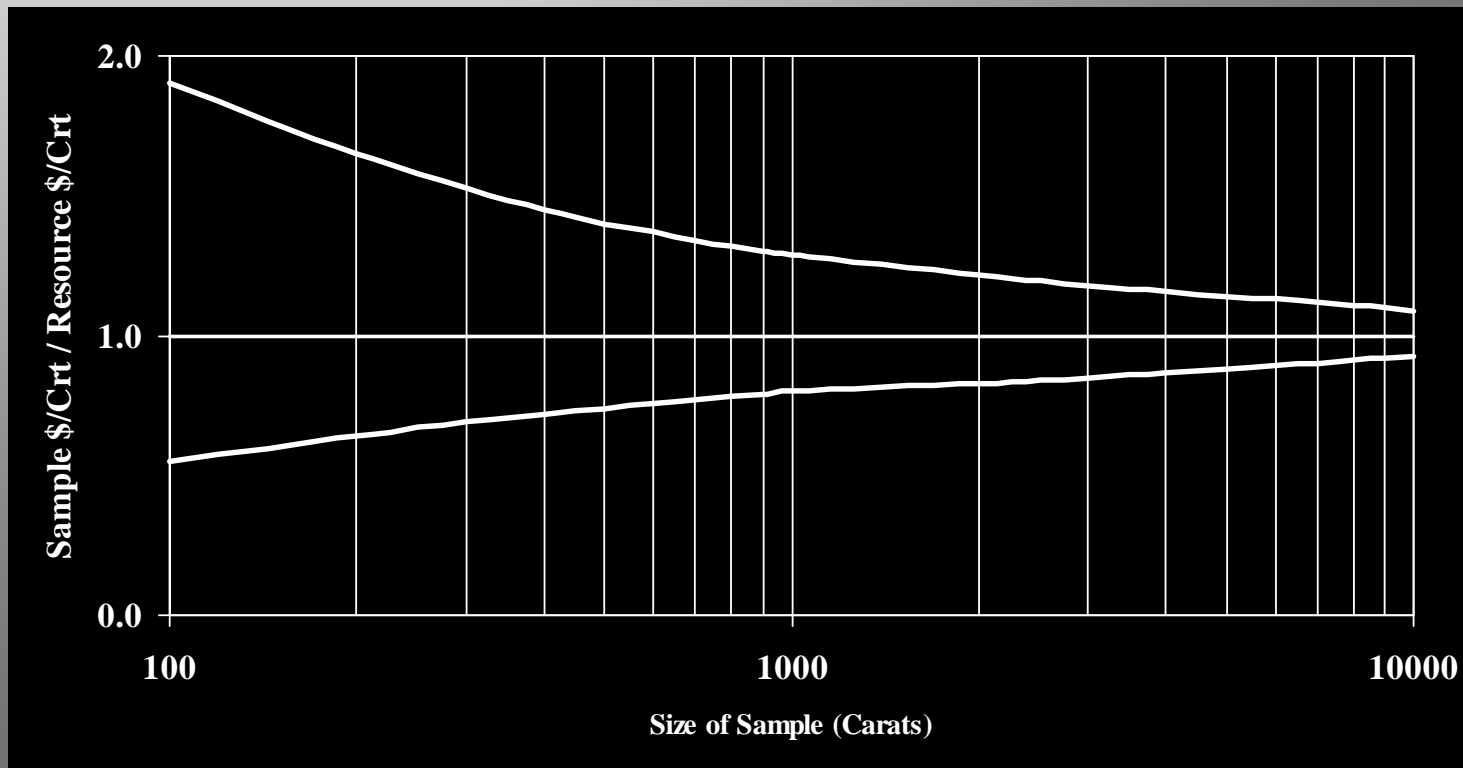
Revenue per Tonne

$$\begin{array}{ccccc} \text{Dollar} & & \text{Carats} & & \text{Dollar} \\ \text{per} & & \text{per} & & \text{per} \\ \text{Carat} & \times & \text{Tonne} & = & \text{Tonne} \end{array}$$



Confidence Limits in the Sample \$/carat

Varies from deposit to deposit





Average Price (\$/carat)

Two components:

Size Frequency Distribution
(no. of carats per size class)

Value Profile
(\$/carat per size class)

Both need analysing and may require modeling

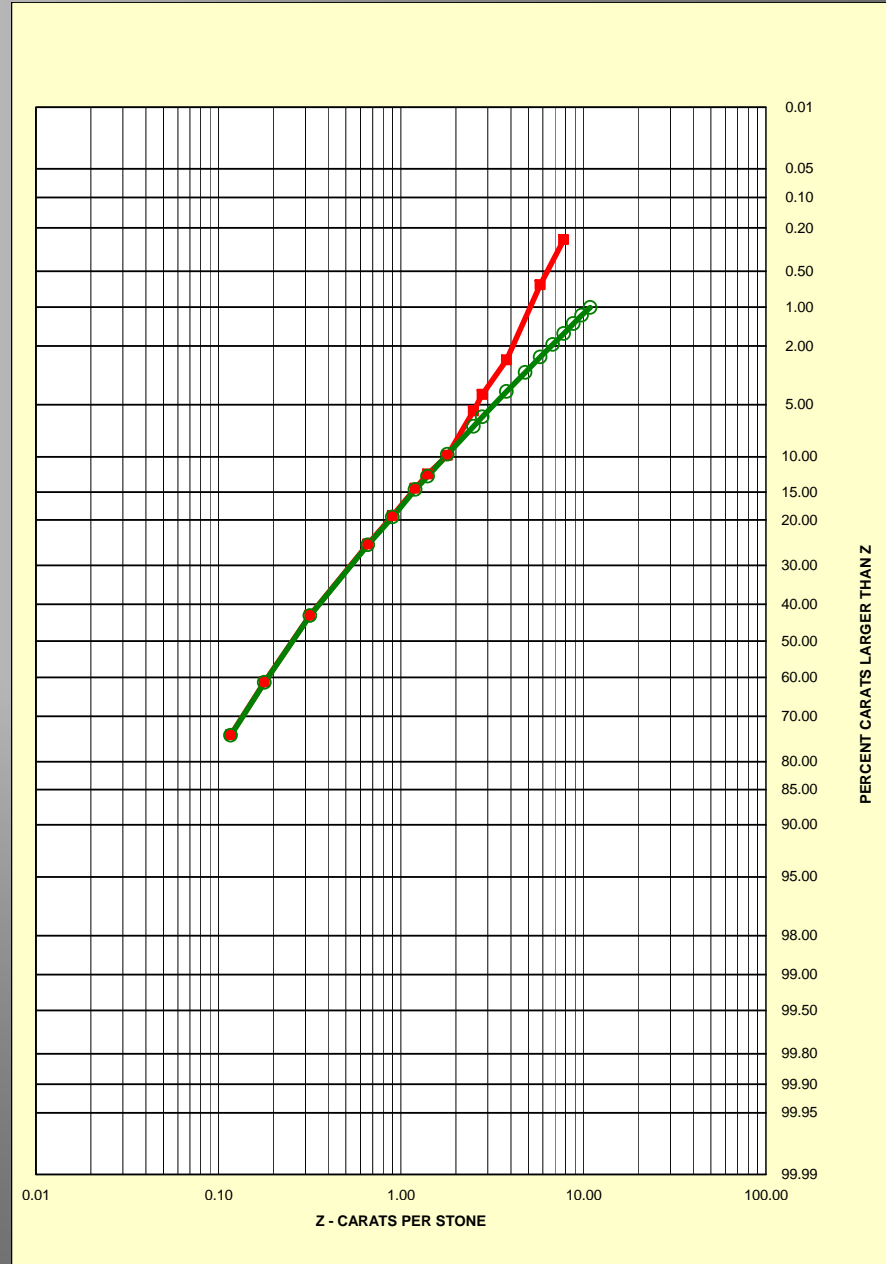


Size Frequency Distribution (SFD)





Size Frequency Distribution (SFD)

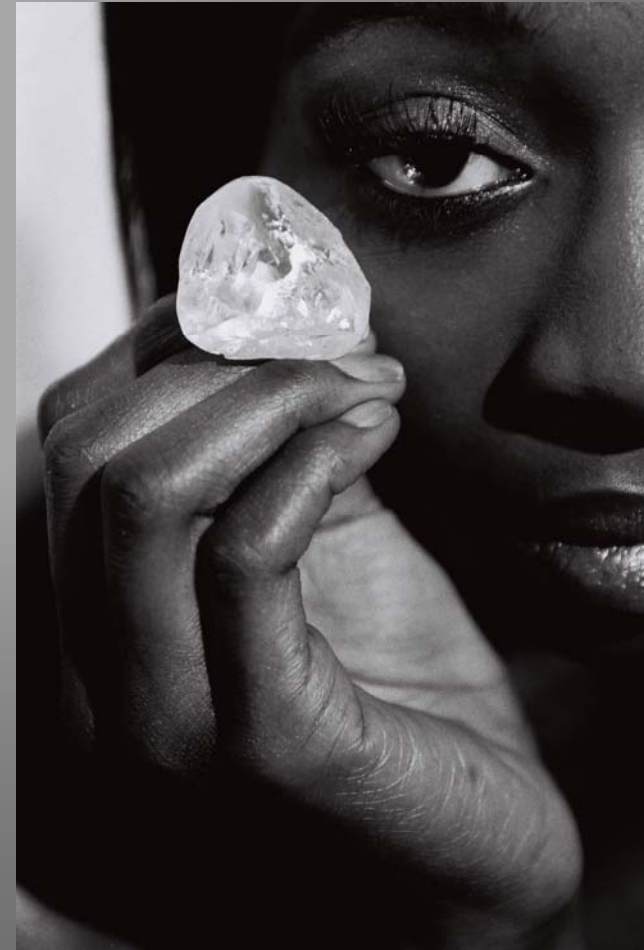




Incidence of Large Stones

- Diamond breakage
- Security
- Size of sample

- Model is important for crusher gap settings and upper screen size decisions





Recovery of Small Stones

- Bottom cut-off used in sampling
- Liberation characteristics
- Process efficiency
- Model is important for bottom cut-off decisions





Modelling the SFD

- Model both the large stone and small stone recovery
- With this model commercial decisions regarding bottom cut-offs and crusher settings can be taken



Micros vs Macros

- Valuation of micro diamonds is virtually meaningless
- Shape colour and quality can be totally different
- Need macro diamonds to estimate the \$/carat

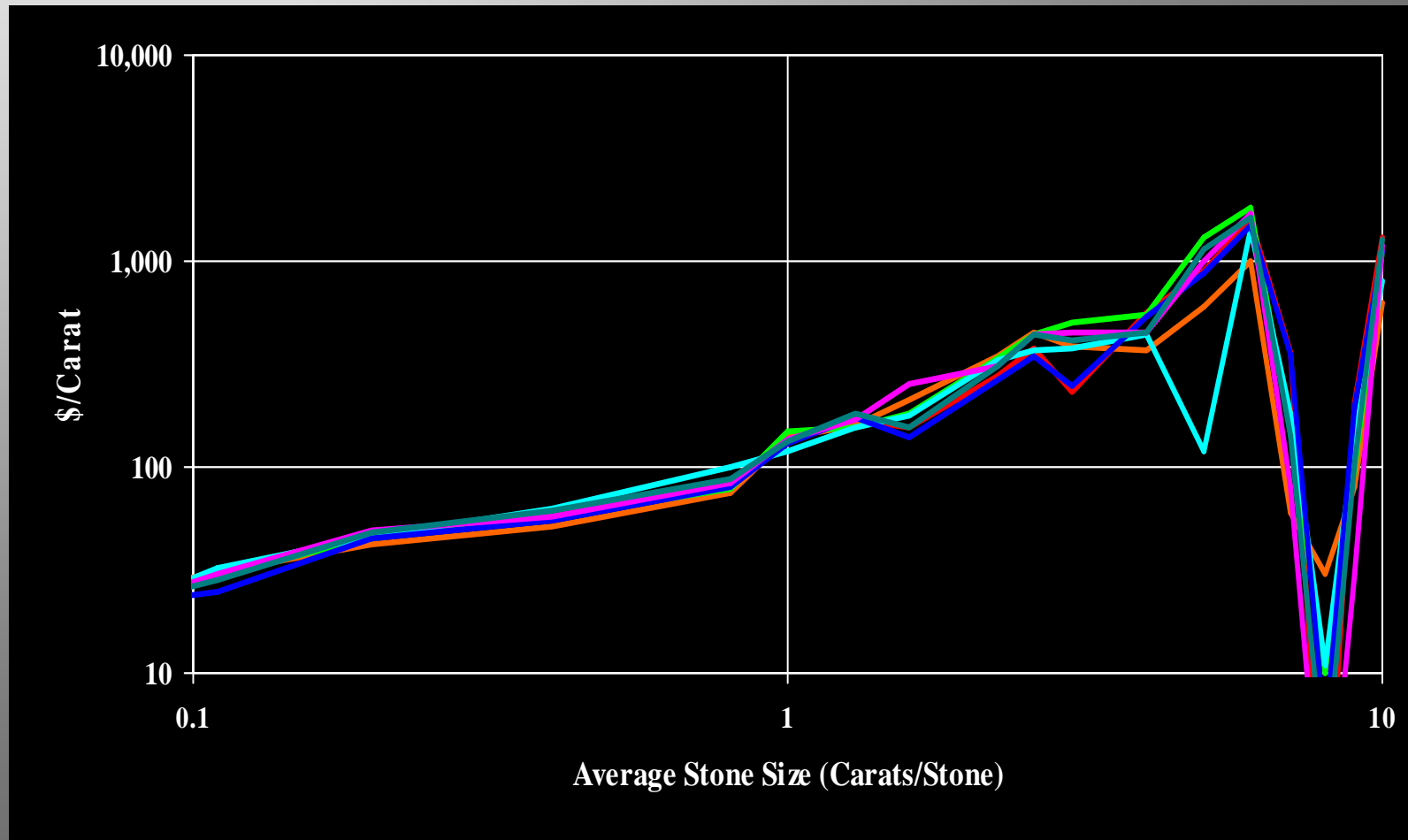


Valuation of the Sample

- Number of different independent valuers
- Diamantaires values reflect their areas of expertise
- Valuers must understand what value is required
- Variable results



Different Independent Valuators



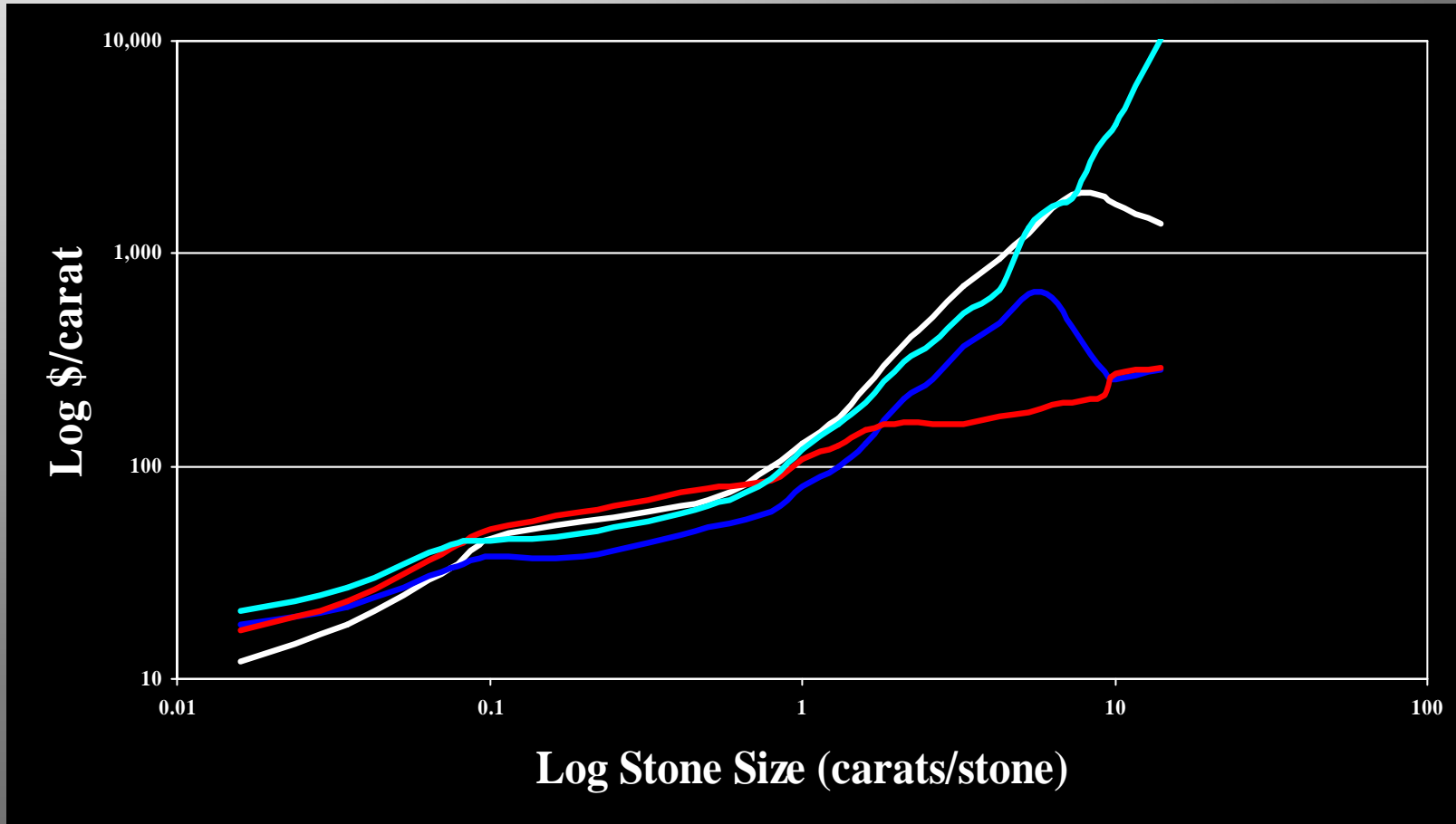


Why the Variability?

- Valuing diamonds is not scientific
- There is no benchmark
- Areas of specialisation

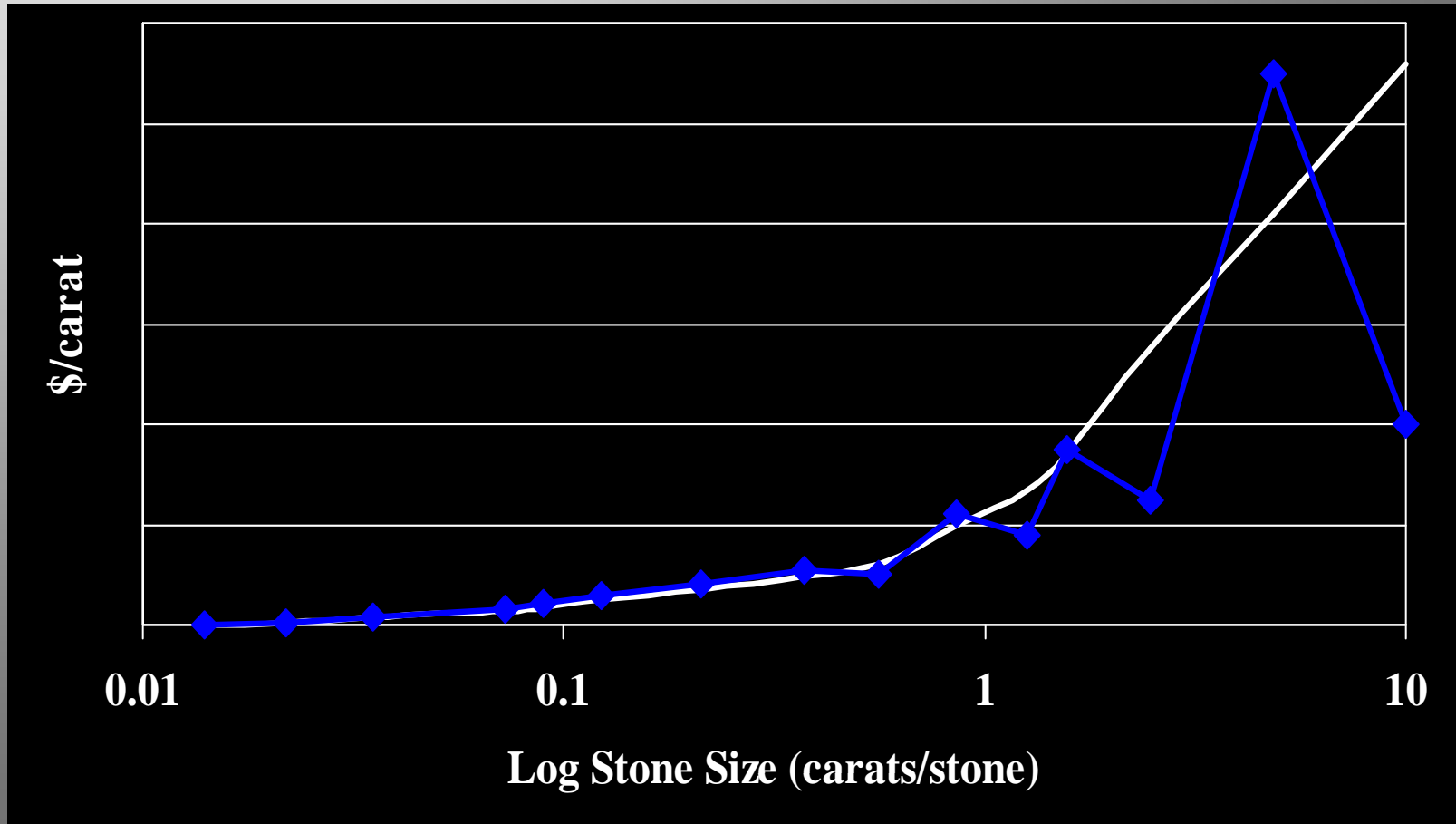


Dollar per Carat vs Size



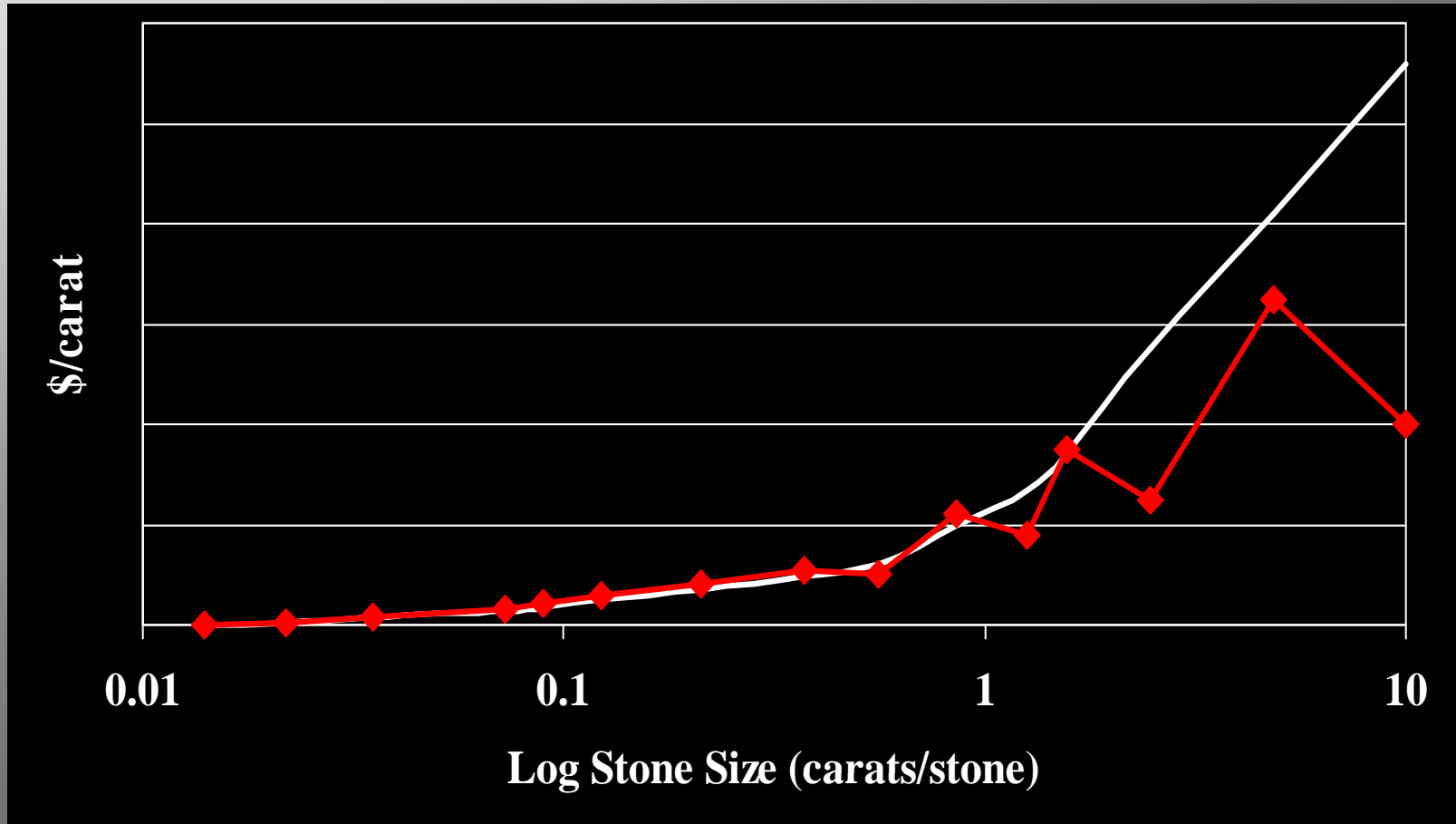


Dollar per Carat Vs Size



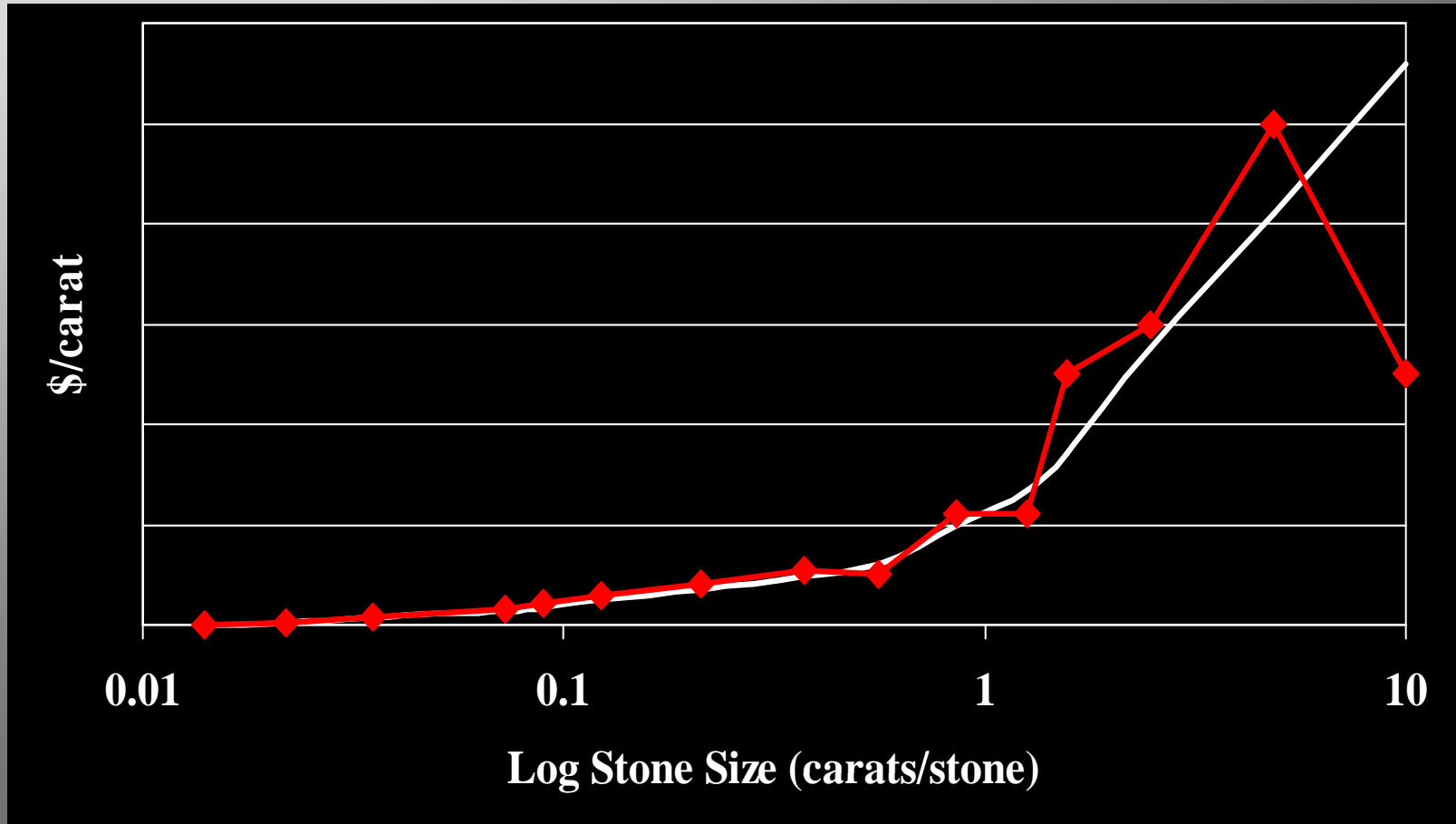


Dollar per Carat Vs Size





Dollar per Carat Vs Size



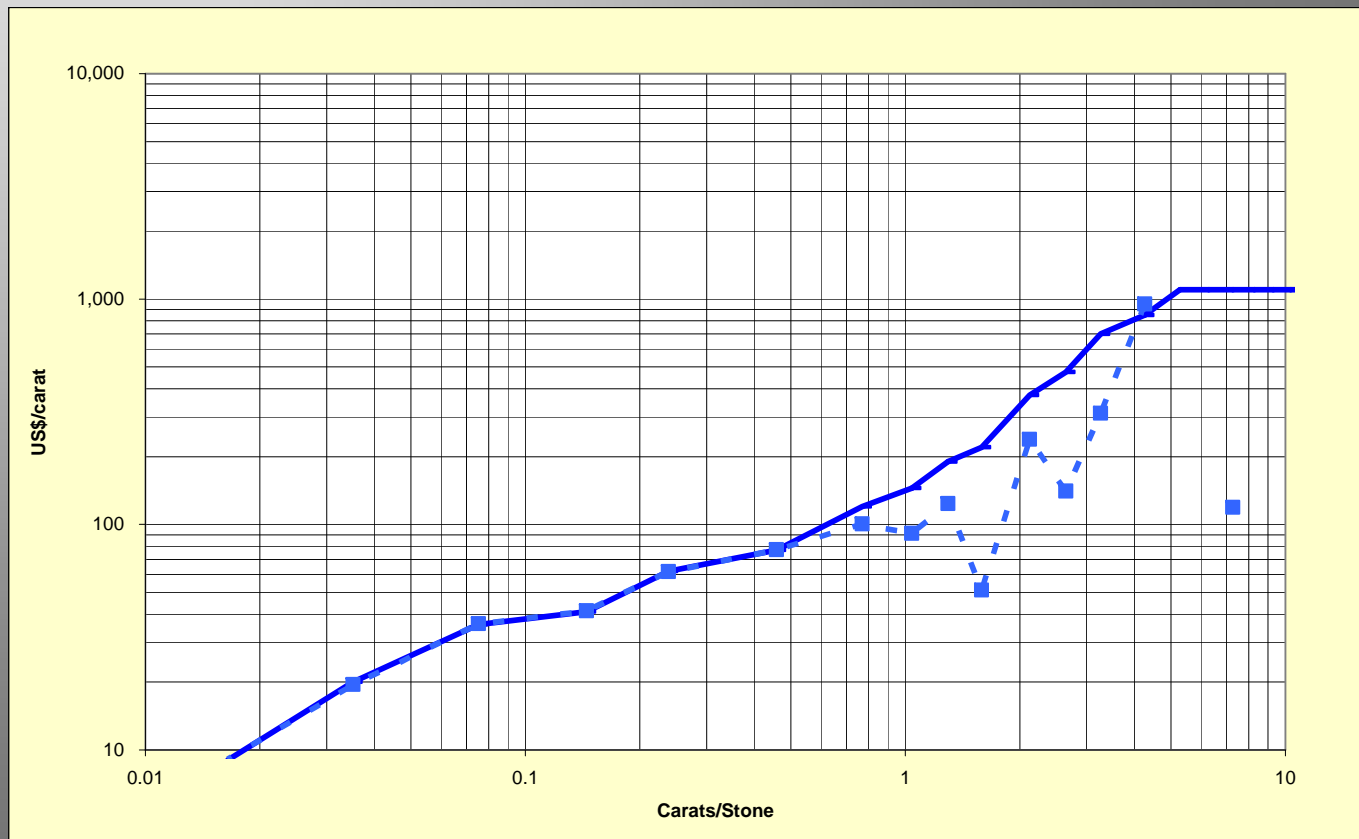


Why the Variability?

- Size of the sample
- Diamond damage
- Diamond breakage
- Recovery efficiencies
- Security

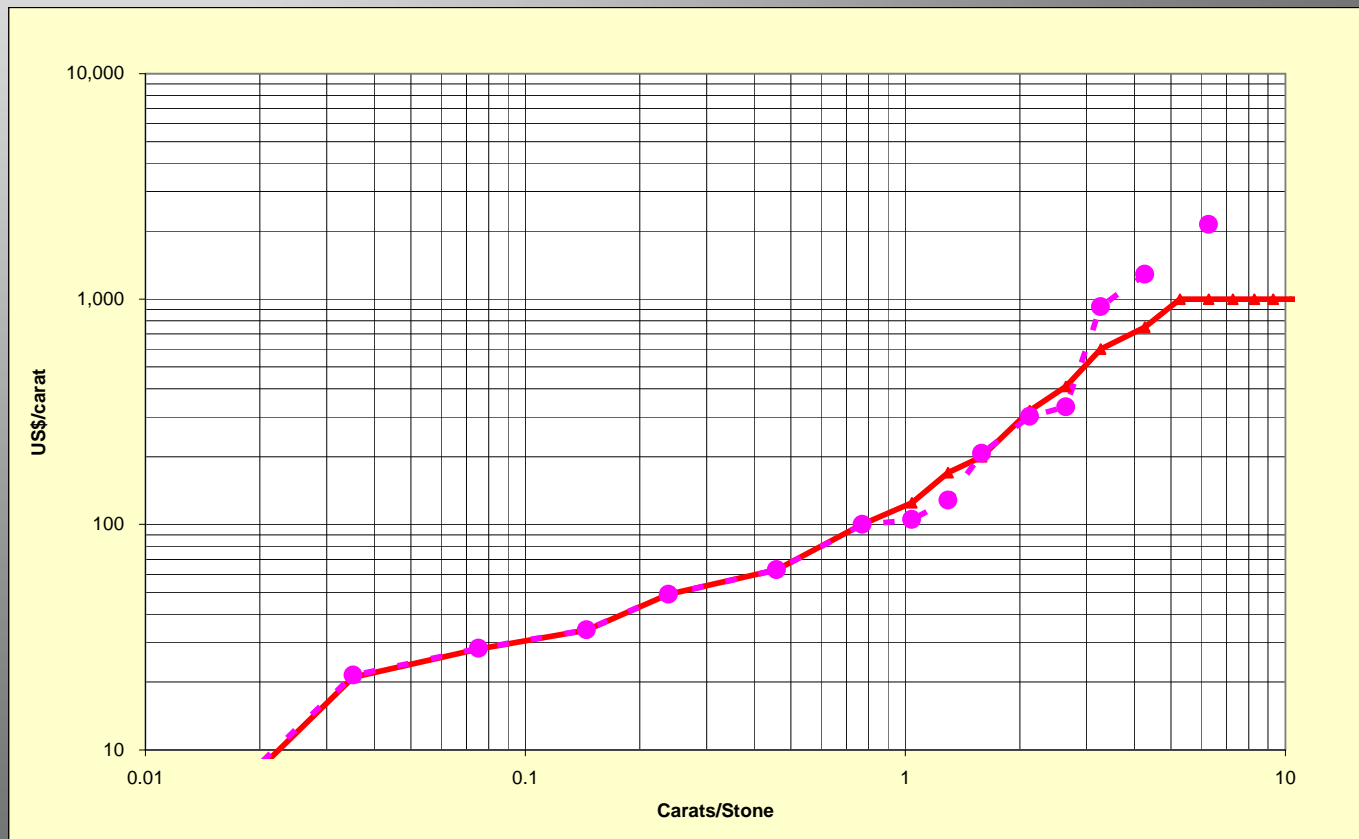


Values per Size Class



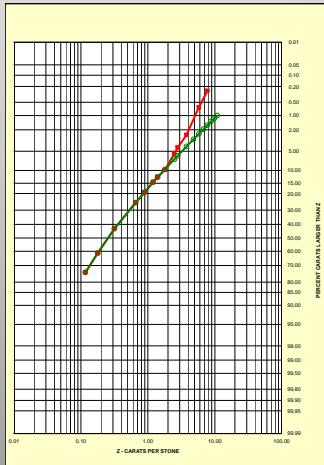


Values per Size Class

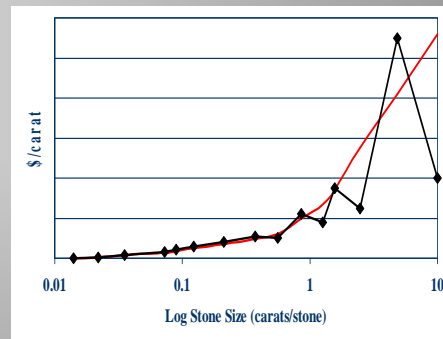




Revenue Estimation



+



= \$/carat

- Modelling may increase or decrease the average price



Confidence in Revenue Estimation

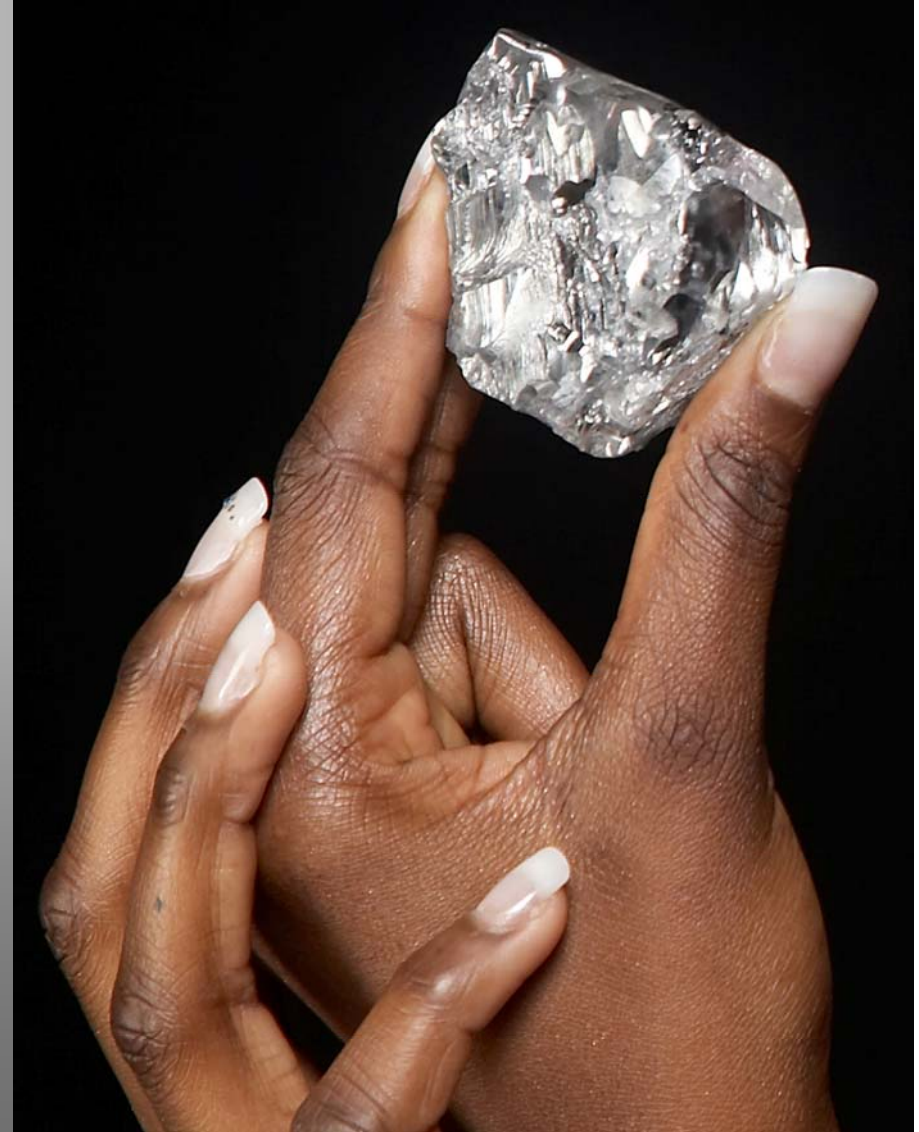
- Size of Sample
- Each resource is unique
- Samples per geological zone
- Valuation is not scientific
- Modelling improves confidence
- Gives an indication of upward and downward potential



Diamonds are Different

Question:

In a diamond mine or sample, when would an increase in the average price (\$ per carat) have a negative impact on the economics?



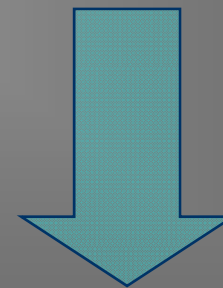
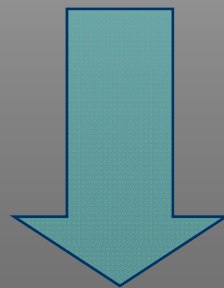
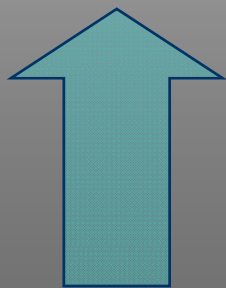


Diamonds are Different

Answer:

- If there is poor recovery of small stones:

$$\begin{array}{ccccc} \text{Dollar} & & \text{Carats} & & \text{Dollar} \\ \text{per} & \times & \text{per} & = & \text{per} \\ \text{Carat} & & \text{Tonne} & & \text{Tonne} \end{array}$$





Size Matters!

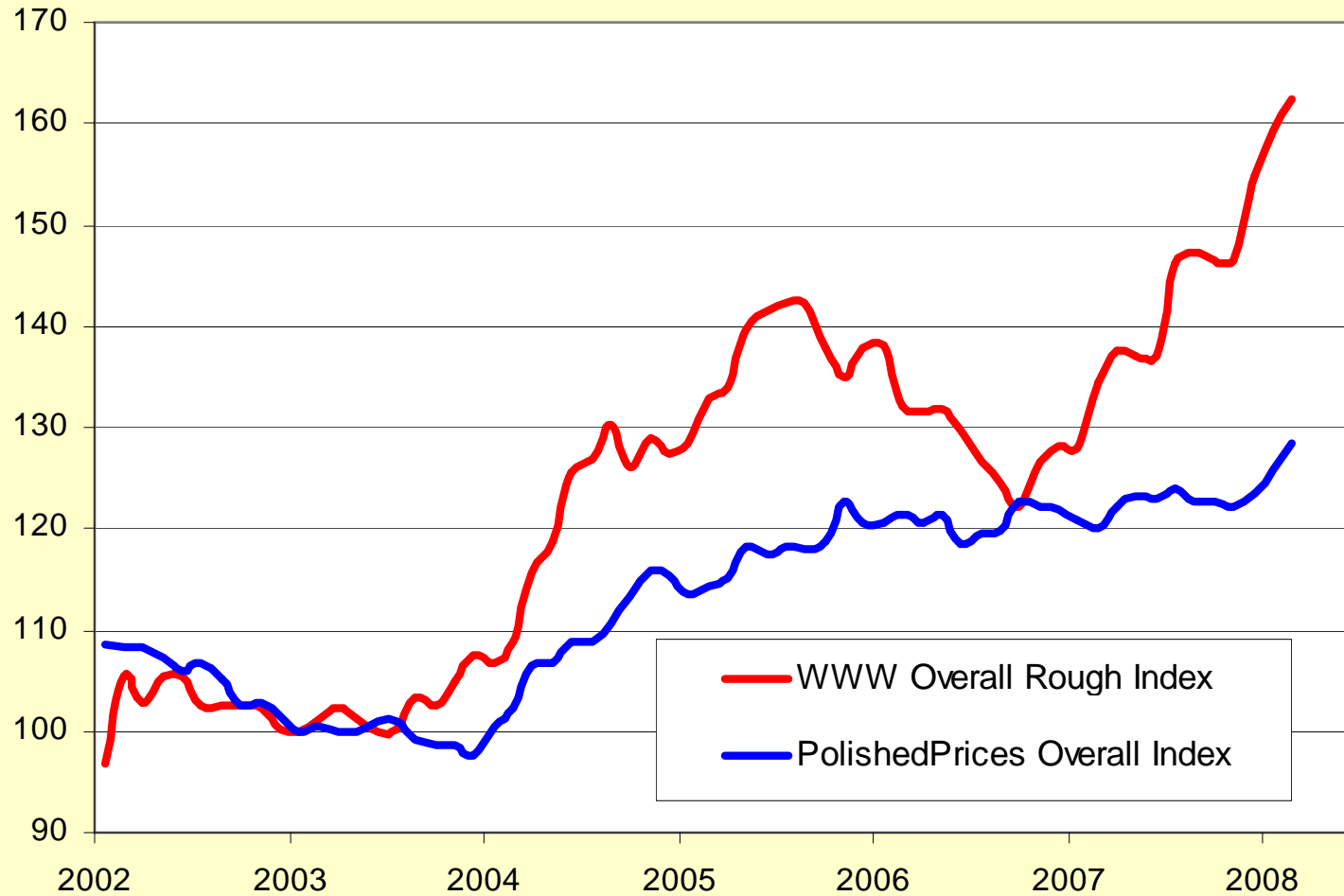




Diamond Price Forecast



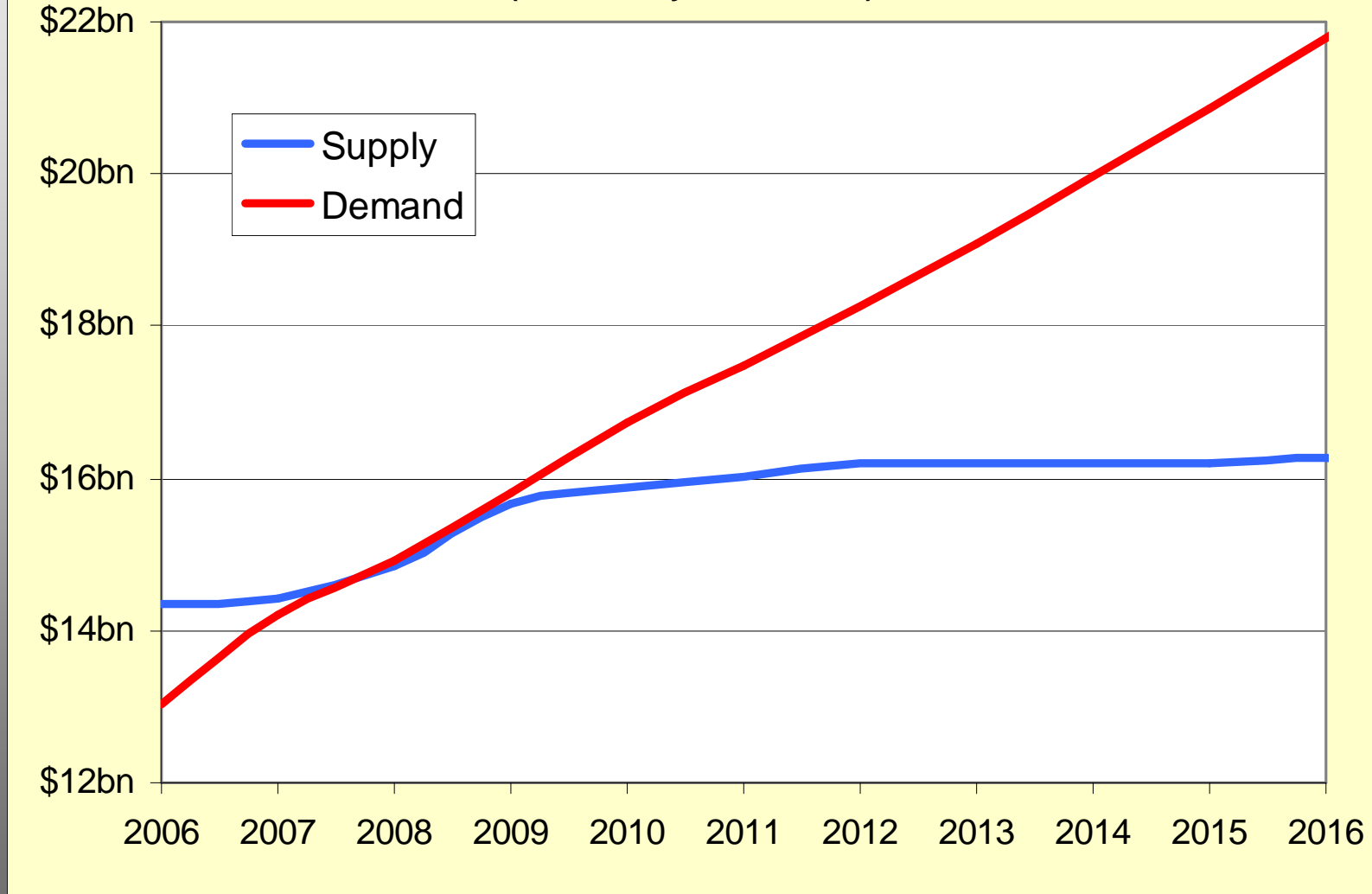
Rough and Polished Prices Jan 2003=100





Supply and Demand in Rough Terms

(at February 2008 values)





Some Immediate Uncertainties/Issues

- America 45% of the market
 - Recession?
 - Bankruptcies
 - Impossible for the diamond industry to ignore.
 - China and India not the answer
 - \$ (profitability, mining costs etc)

- Africa
 - Power shortages – impact on rough supplies?
 - Impact of Beneficiation

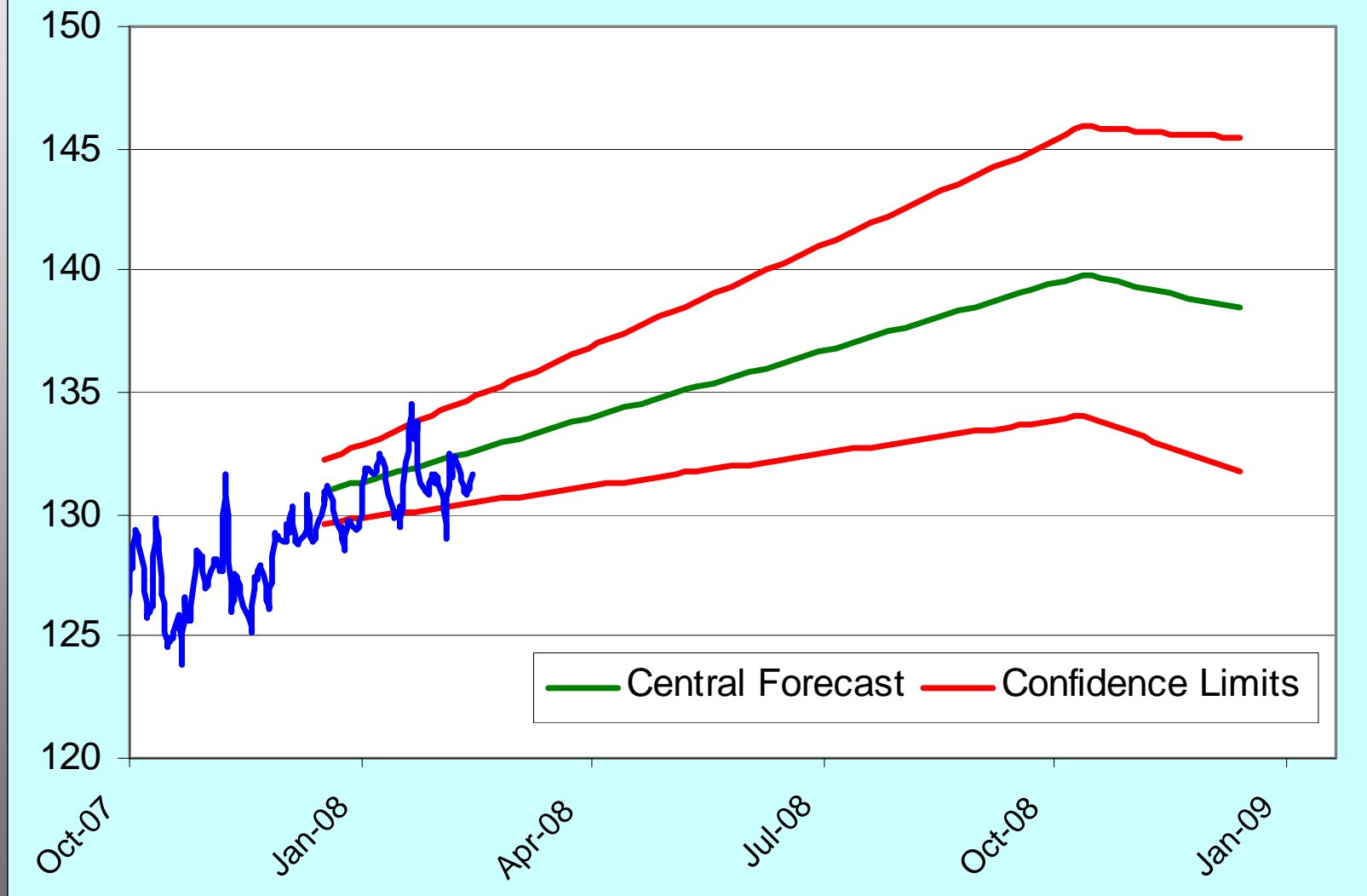
- Corporate
 - BHP / Rio
 - Anglo / De Beers
 - ABN Amro

- Industry
 - Restructuring
 - Legal issues
 - Producer Supply policies



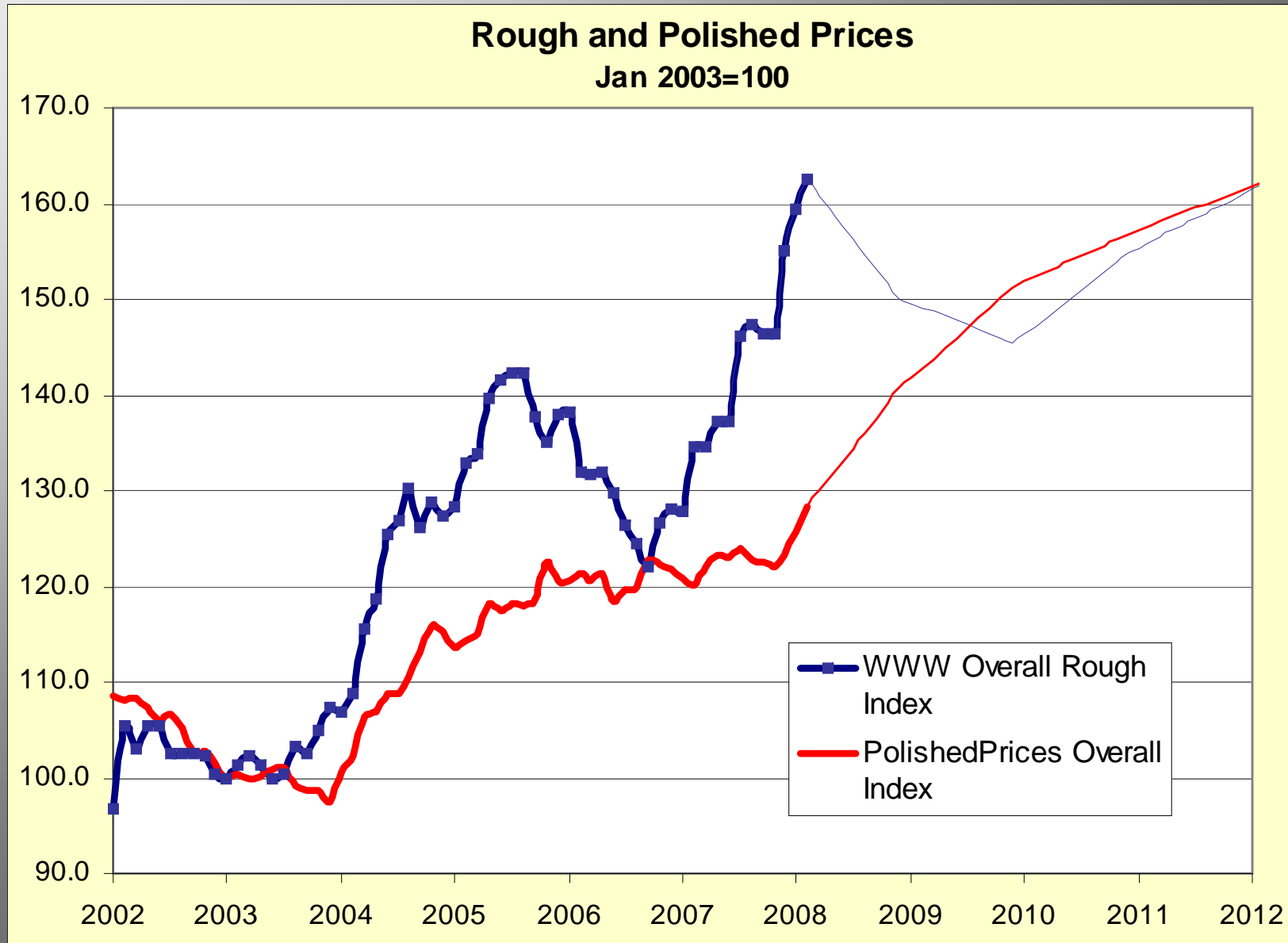
PolishedPrices Overall Index

Jan 2008 Forecast



Source: PolishedPrices.com

WWW International Diamond Consultants Ltd.



Source: WWT & PolishedPrices.com

WWT International Diamond Consultants Ltd.



2008 Forecast

- In this forecast Polished prices 'will' rise this year by 14%, and on average 2008 prices 'will' be 9% above 2007
- Rough, on the other hand 'will' on average in 2008 be 10% higher than 2007, however by the end of 2008 prices are 8% below current values
- This is an overall forecast, different segments rough and polished will perform very differently
- 2008 has started very well, almost too well.....



Valuation and Modelling of Diamond Values & Diamond Price Forecast

Neil Buxton

WWW International Diamond
Consultants Ltd.

Toronto, March 2008

neil@diamondwww.com

www.diamondwww.com