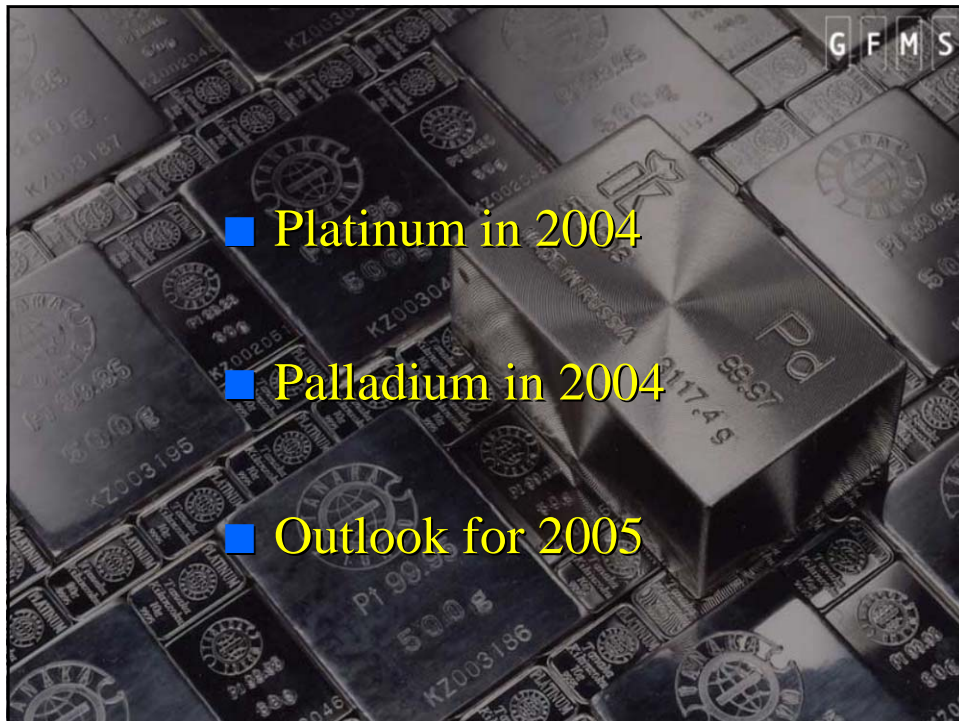




GFMS gratefully acknowledges the generous GFMS support from the following companies for this year's Platinum and Palladium Survey

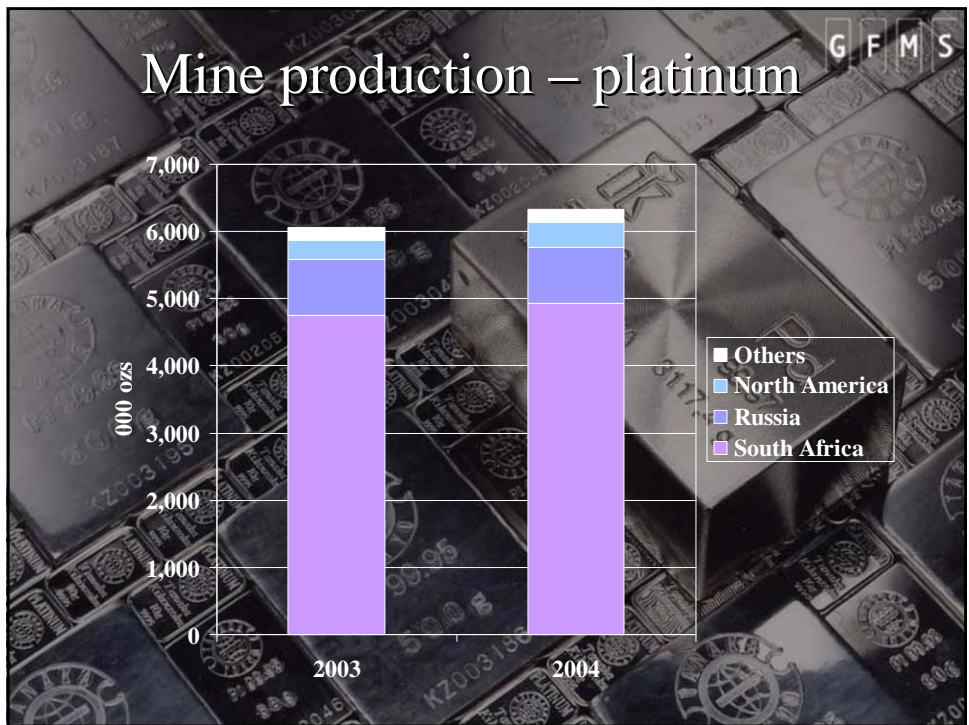


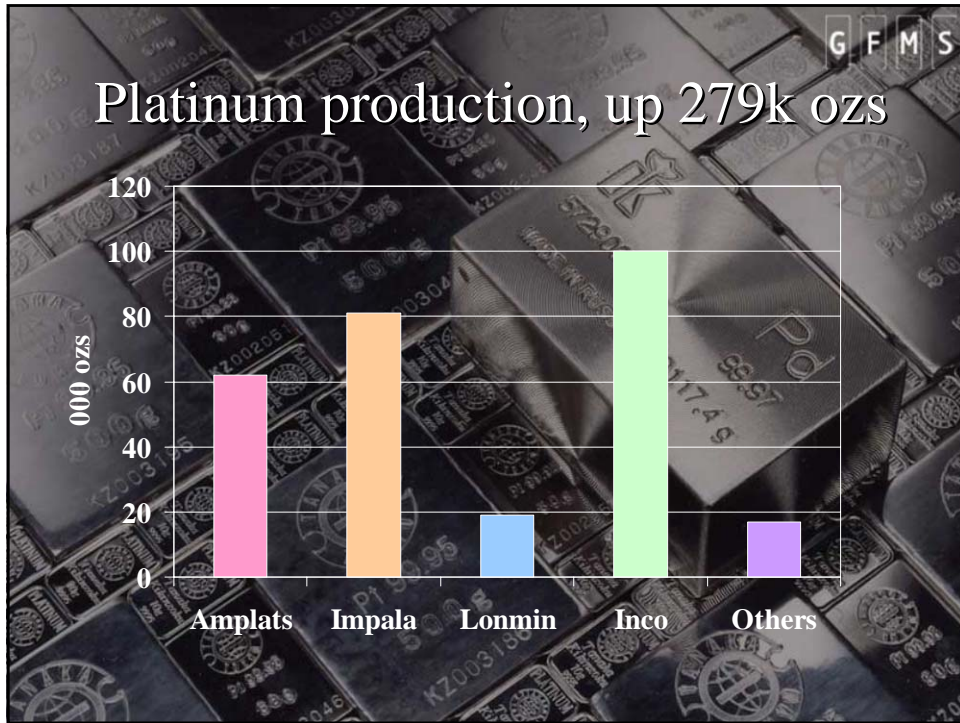
[www.standardbank.com](http://www.standardbank.com)



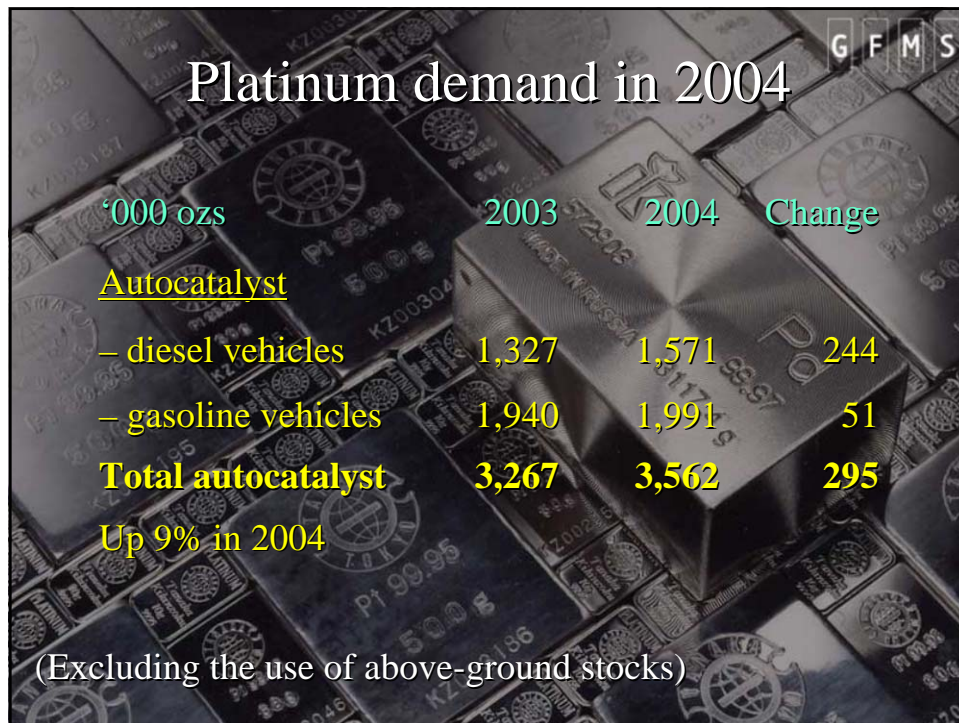
## Platinum: 2004 highlights

- Supply increased to 7.1m ozs, up 4.8%
  - Mine output & autocat recycling both continue to grow
- Fabrication declined slightly to 7.5m ozs
  - First decline in demand for many years
  - Autocatalyst and glass demand both higher, but...
  - Jewellery sharply lower as demand in China slumped
- Gross deficit persisted but narrowed significantly
- Supplies from identified stocks somewhat lower
- Residual deficit remained but contracted sharply



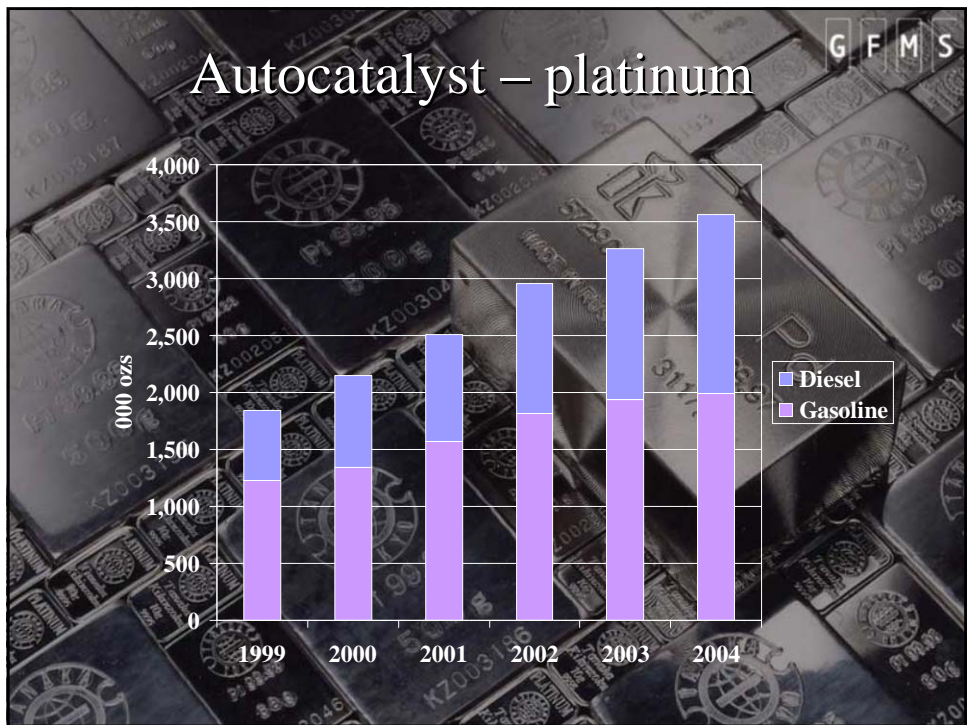


- ### Autocatalyst scrap, platinum
- Recovery rose by 6% in 2004 to 780,000 ozs
    - Platinum recovery up 50% since 1999
    - Exceeded mine production from world # 4 Norilsk
  - North America remains dominant, 495,000 ozs
    - Rate of growth has been slowing, 2% in 2004
  - Europe rising fast, 2004 was 150,000 ozs, up 21%
    - Recovery has quadrupled since 1999
    - Market remains far from maturity, lots more to come
  - Recovery in other territories 135,000 ozs, up 8%



## Autocatalyst demand, platinum

- Demand rose by 9% in 2004 to 3.56m ozs
- North America 8% lower at 737,000 ozs
  - Tier II gains outweighed by thrifting & Pd substitution
  - Light vehicle production down slightly
- Europe up 17% at 1.58m ozs
  - Proportion of Euro IV compliant vehicles increased
  - Production of diesels up 12% in 2004
  - Diesel share of production up from 42% to 45%
  - Light, vehicle production 5% higher
- Demand elsewhere 12% higher at 1.24m ozs
  - Higher production e.g. Japan, Brazil, China, India
  - Tighter regulations e.g. China and India







### Jewellery margins - China

	Gold	Gold	Platinum	Palladium
Product	24 carat	18 carat*	Pt950	Pd950
Fabricator	1.7%	24.8%	2.1%	11.1%
Retailer	11.2%	33.4%	11.6%	62.8%

\*Average of yellow and white gold

### Platinum demand in 2004 GFMS

'000 ozs	2003	2004	Change
Autocatalyst	3,267	3,562	295
Jewellery	2,694	2,027	(667)
<b>Industrial</b>			
– glass industry	315	490	175
– other sectors	1,336	1,390	54
<b>Total demand</b>	<b>7,612</b>	<b>7,469</b>	<b>(143)</b>
<b>Down 2% in 2004</b>			
(Excluding the use of above-ground stocks)			

### Platinum supply & demand GFMS

'000 ozs	2003	2004	Change
Supply	6,792	7,116	324
Demand	7,612	7,469	(143)
<b>Gross surplus (deficit)</b>	<b>(820)</b>	<b>(353)</b>	<b>467</b>
(Excluding above-ground stocks)			



## Platinum supply & demand

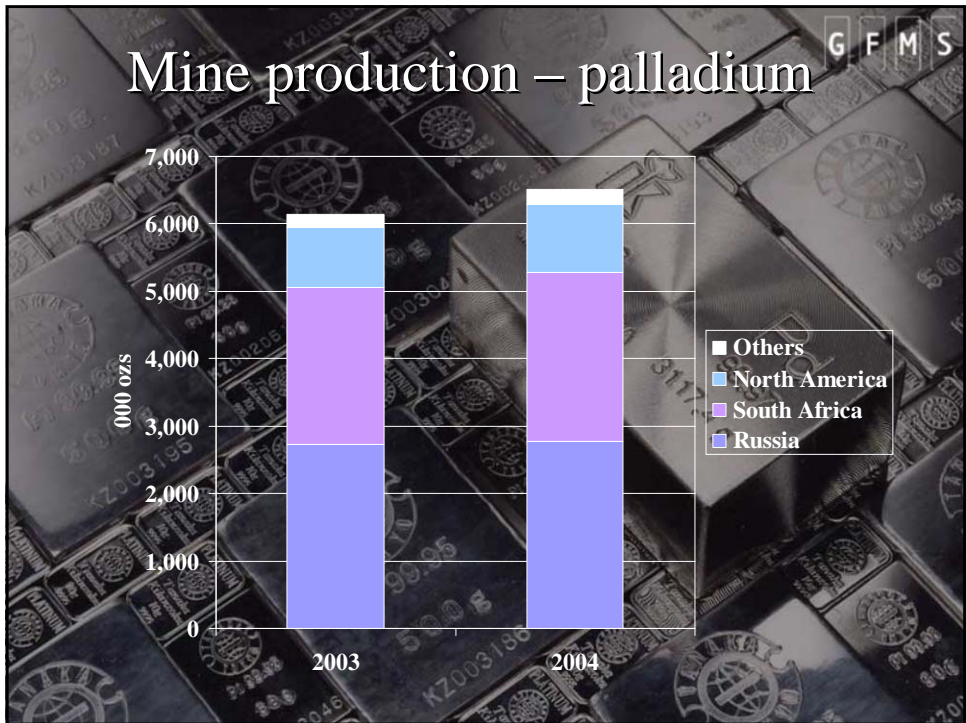
'000 ozs	2003	2004	Change
Gross surplus (deficit)	(820)	(353)	467
<u>Above-ground stocks</u>			
Russia	166	165	(1)
Auto industry	100	0	(100)
<b>Residual surplus (deficit)</b>	<b>(554)</b>	<b>(188)</b>	<b>366</b>

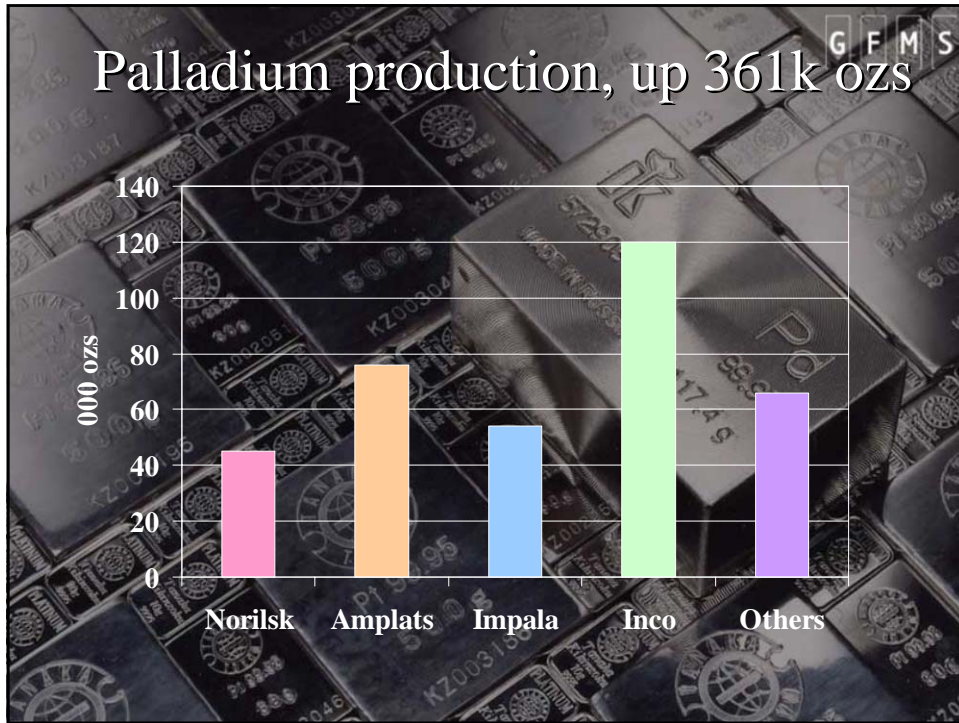
(Excluding above-ground stocks)

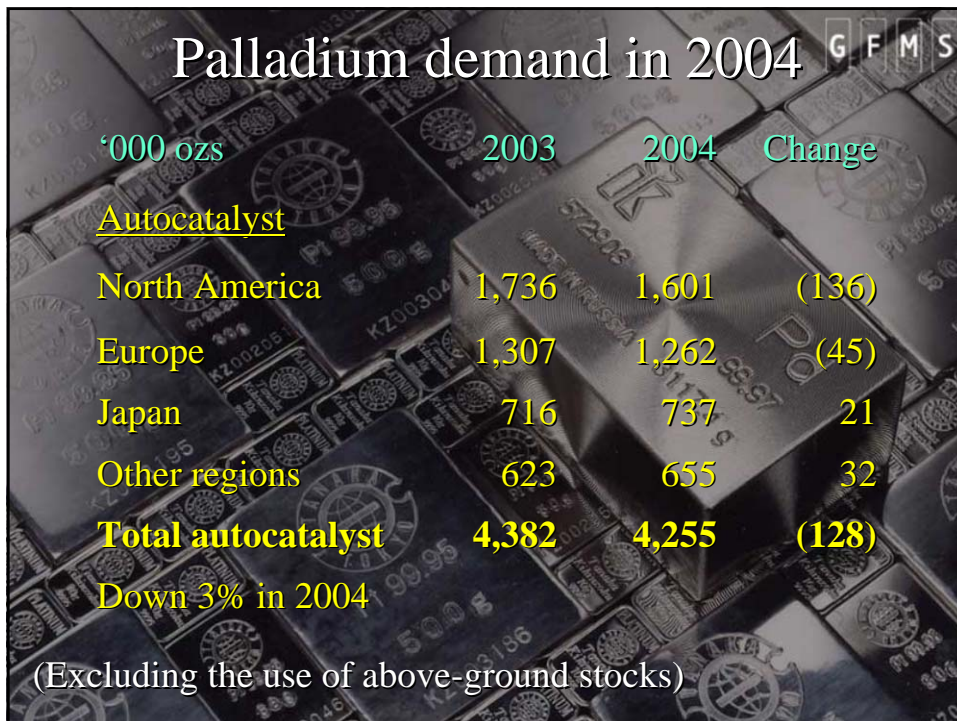
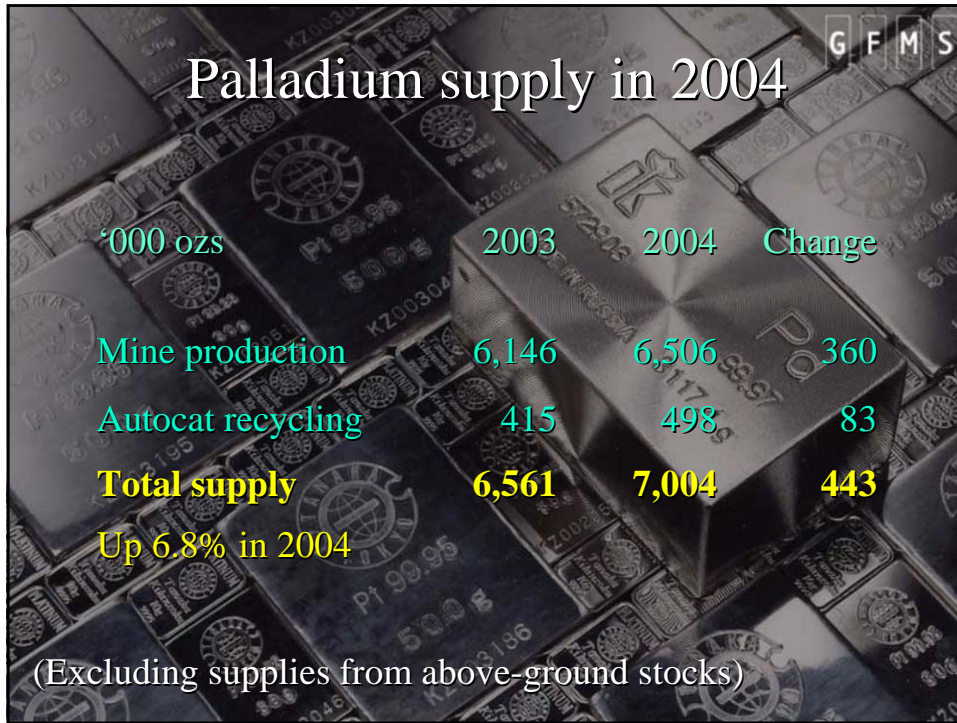


## Palladium: 2004 highlights

- Supply rose from 6.6m ozs to 7m ozs, up 6.75%
  - Mine output up almost 6%, autocat recycling up 20%
- Fabrication demand up almost 5% at 7.3m ozs
  - First improvement in several years
  - Major jewellery gains partly offset by lower autocatalyst
  - Electronics, dental and other sectors slightly better
- Gross deficit remained but continued to contract
- Supplies from identified stocks substantial but lower
- Residual surplus persisted but reduced modestly

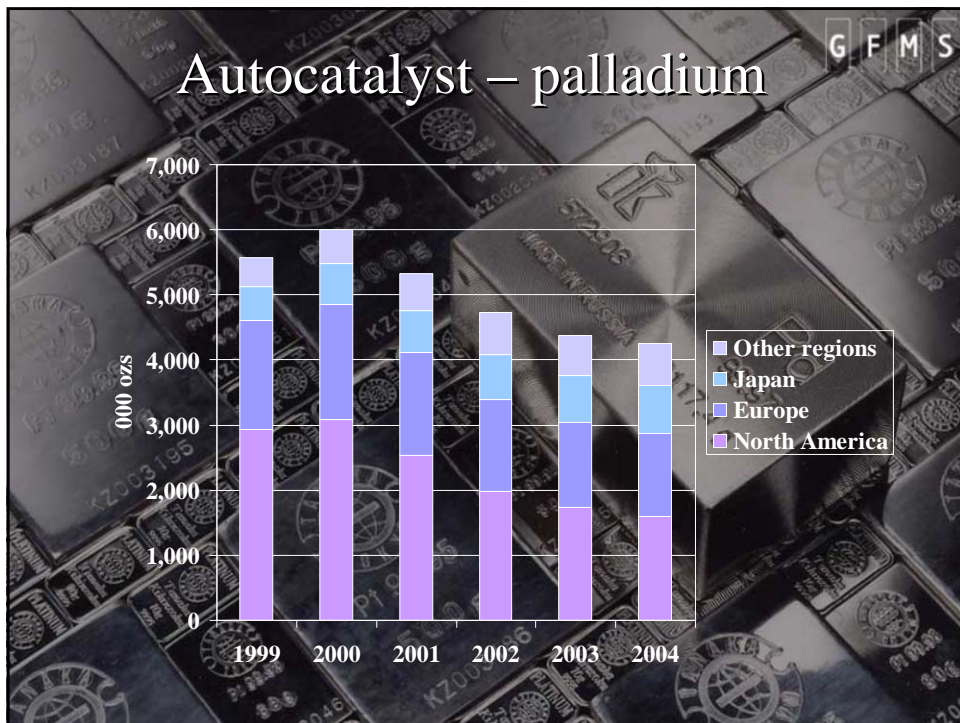


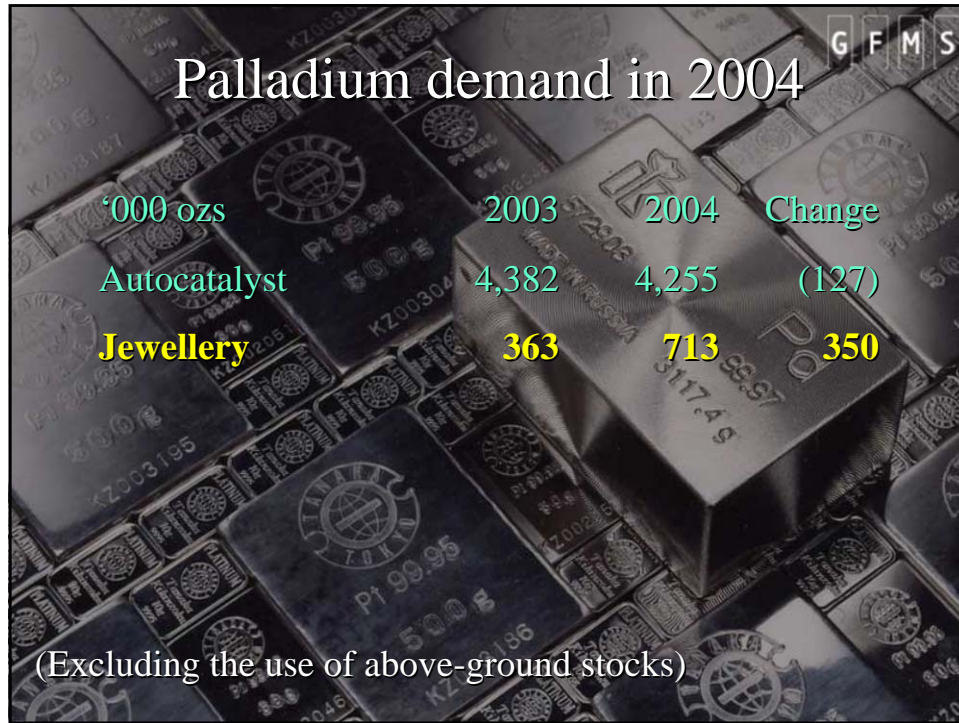


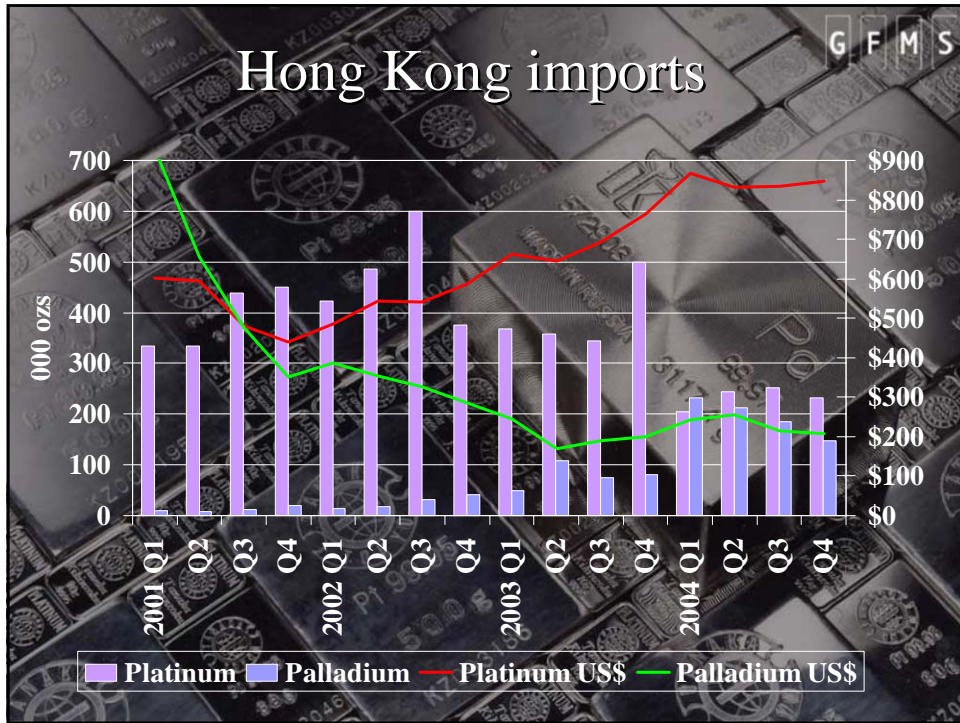


## Autocatalyst demand, palladium

- Demand reduced by 3% in 2004 to 4.26m ozs
- North America down 8% at 1.6m ozs
  - Further thrifting outweighed Tier II and substitution gains
  - Demand has almost halved since 1999
- Europe 3% lower at 1.26m ozs
  - Production of gasoline vehicles static
  - Euro IV and substitution gains offset by thrifting
- Elsewhere, demand up 4% at 1.39m ozs
  - Increased vehicle production e.g. Japan, Brazil, China, India
  - Tighter regulations e.g. China and India





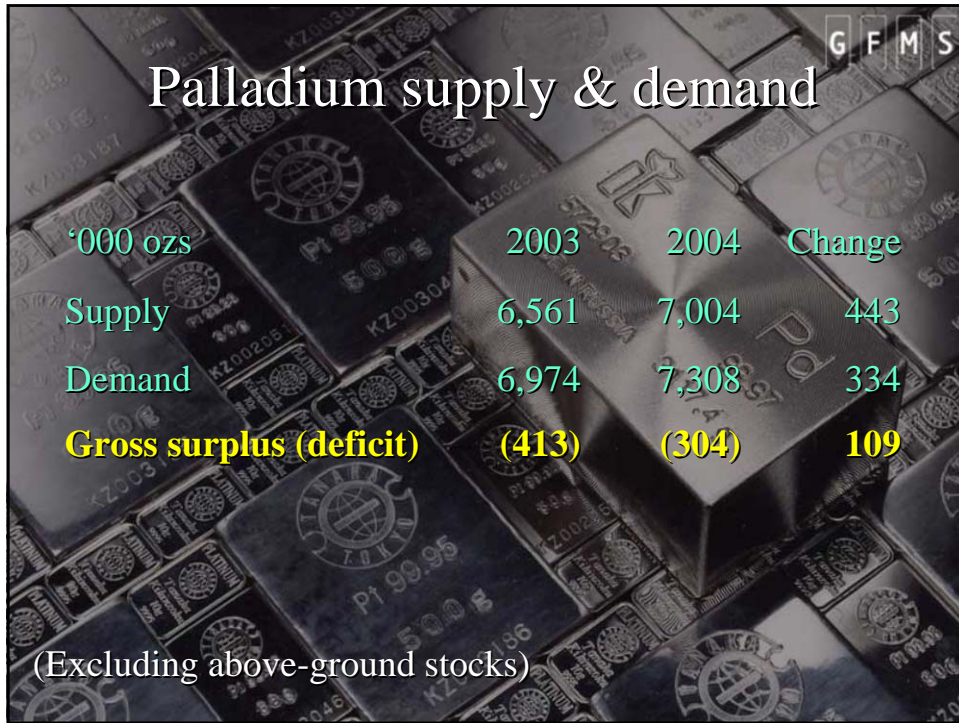


### Palladium demand in 2004

'000 ozs	2003	2004	Change
Autocatalyst	4,382	4,255	(127)
Jewellery	363	713	350
<b>Industrial</b>			
– electronics	1,015	1,066	51
– other sectors	1,213	1,274	61
<b>Total demand</b>	<b>6,974</b>	<b>7,308</b>	<b>334</b>

Up 5% in 2004

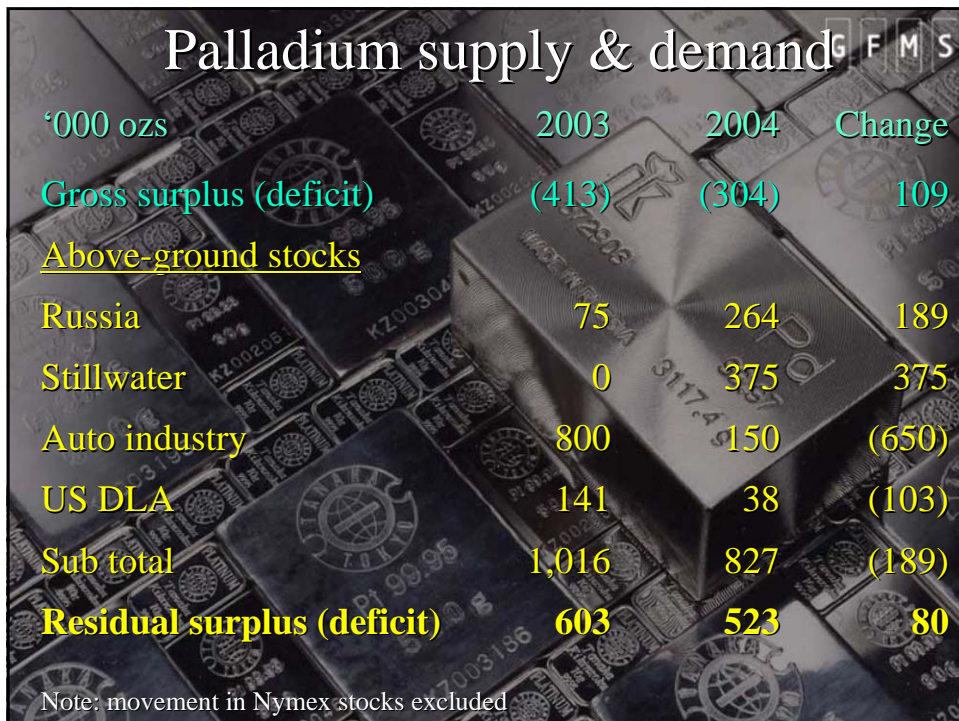
(Excluding the use of above-ground stocks)



### Palladium supply & demand

'000 ozs	2003	2004	Change
Supply	6,561	7,004	443
Demand	6,974	7,308	334
<b>Gross surplus (deficit)</b>	<b>(413)</b>	<b>(304)</b>	<b>109</b>

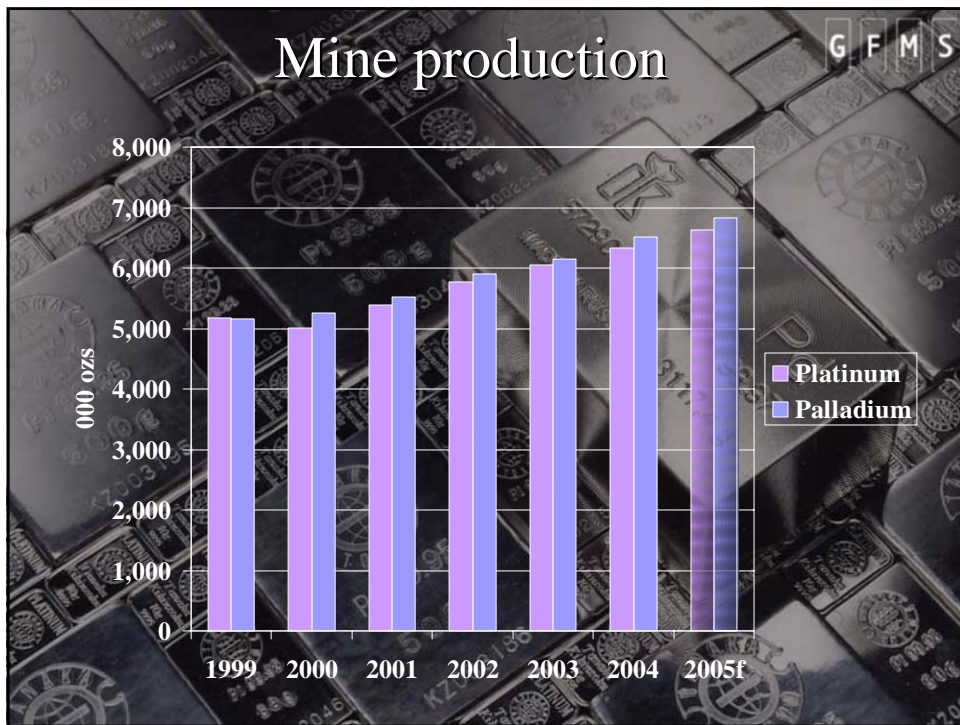
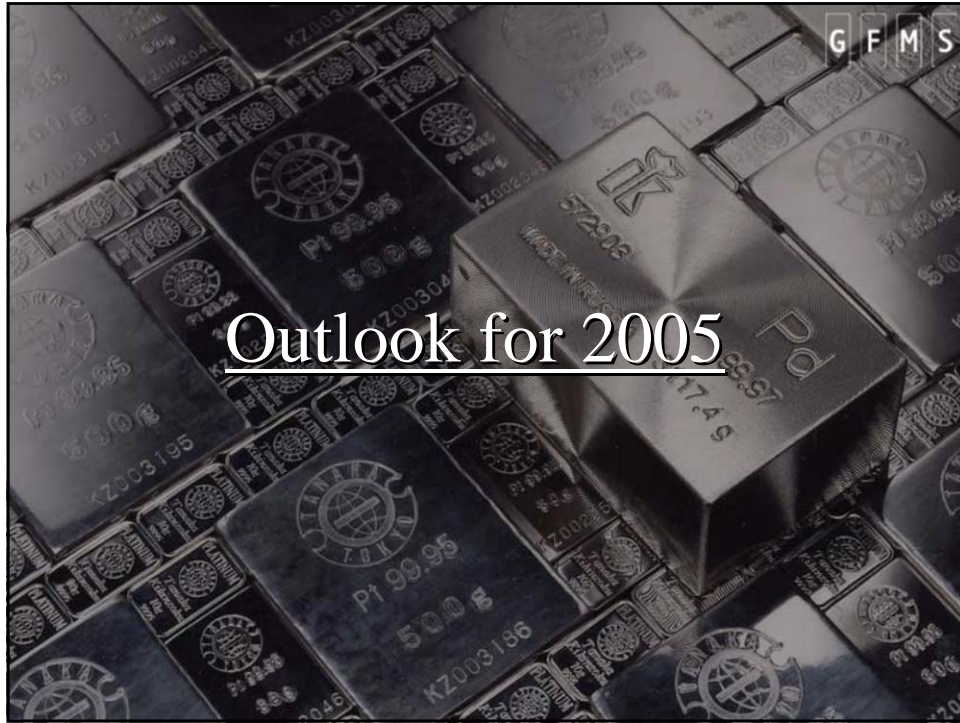
(Excluding above-ground stocks)

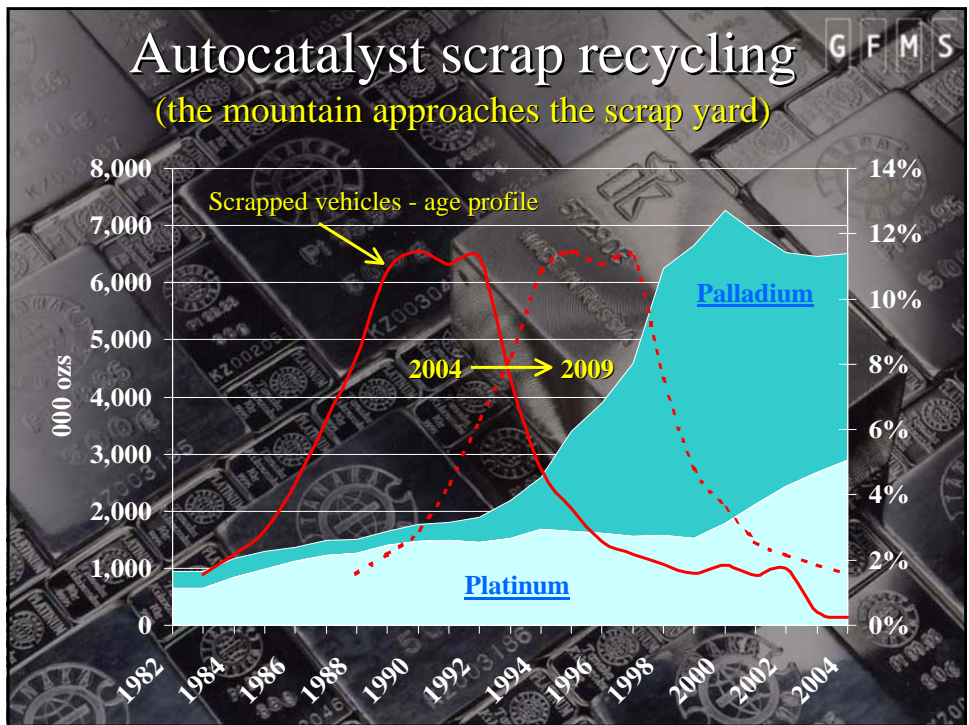
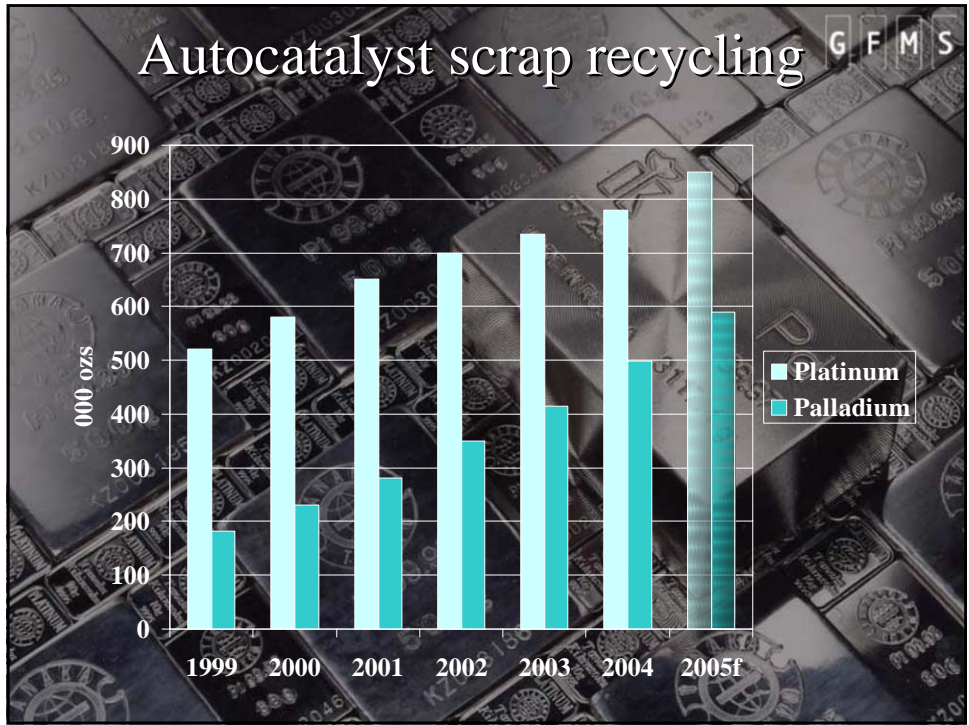


### Palladium supply & demand

'000 ozs	2003	2004	Change
Gross surplus (deficit)	(413)	(304)	109
<u>Above-ground stocks</u>			
Russia	75	264	189
Stillwater	0	375	375
Auto industry	800	150	(650)
US DLA	141	38	(103)
Sub total	1,016	827	(189)
<b>Residual surplus (deficit)</b>	<b>603</b>	<b>523</b>	<b>80</b>

Note: movement in Nymex stocks excluded





## Demand outlook - 2005

### Platinum – some decline expected

- Autocatalyst: modest growth anticipated
  - Diesel & legislation to outweigh substitution & thrifting
- Jewellery: declining further as high prices persist
  - Reductions in China & Japan, elsewhere stable
- Glass: significant decline expected after 2004 peak

### Palladium – expected to rise modestly

- Autocatalyst: expected to stabilise at 2004 level
  - substitution & legislation to counter diesel & thrifting
- Jewellery: consolidation in China, modest growth
  - supported by demand for white gold

## Above-Ground Stocks

### ■ Stillwater inventory

- Palladium sales of 440,000 ozs expected in 2005
- Programme scheduled for completion in Q1 of 2006

### ■ Automotive industry

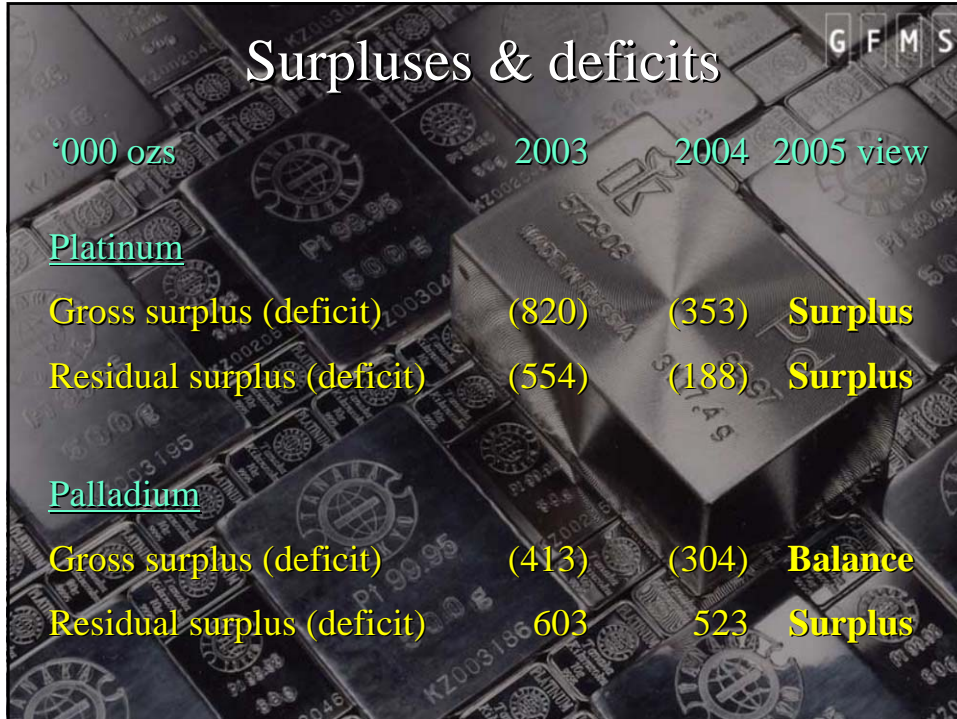
- Platinum & palladium now at normal working levels

### ■ Russia

- Platinum: popular view is stocks are largely depleted
- Palladium: popular view is..... they aren't!!

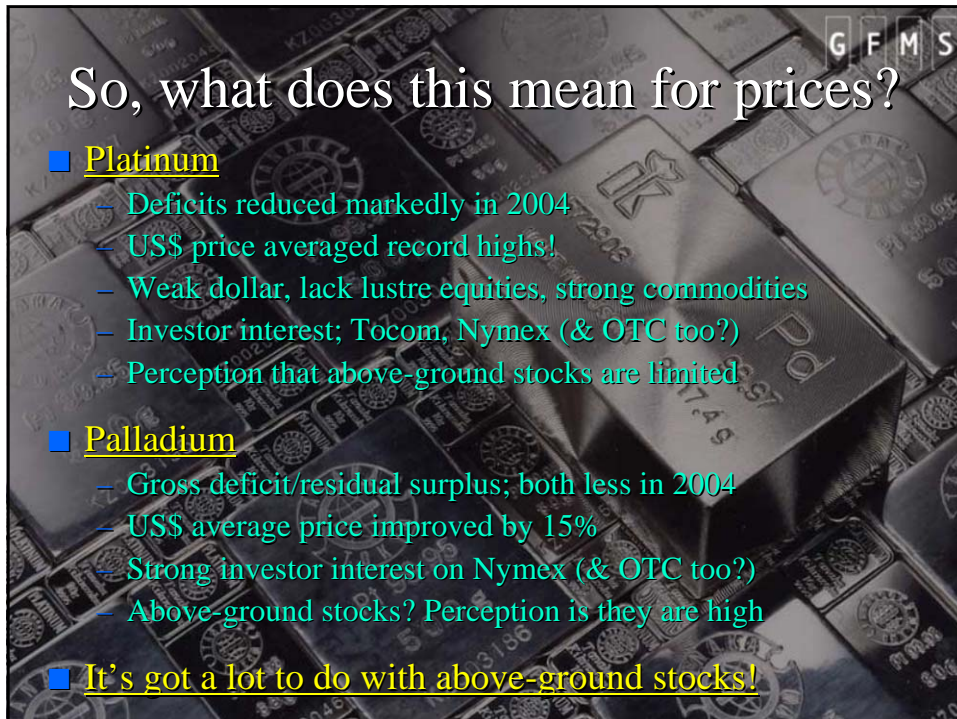
### ■ Nymex depositories

- Palladium: 700,000 ozs held there as ingot/plate
- Should we be worried about this? Probably not



## Surpluses & deficits

'000 ozs	2003	2004	2005 view
<u>Platinum</u>			
Gross surplus (deficit)	(820)	(353)	<b>Surplus</b>
Residual surplus (deficit)	(554)	(188)	<b>Surplus</b>
<u>Palladium</u>			
Gross surplus (deficit)	(413)	(304)	<b>Balance</b>
Residual surplus (deficit)	603	523	<b>Surplus</b>



## So, what does this mean for prices?

- Platinum
  - Deficits reduced markedly in 2004
  - US\$ price averaged record highs!
  - Weak dollar, lack lustre equities, strong commodities
  - Investor interest; Tocom, Nymex (& OTC too?)
  - Perception that above-ground stocks are limited
- Palladium
  - Gross deficit/residual surplus; both less in 2004
  - US\$ average price improved by 15%
  - Strong investor interest on Nymex (& OTC too?)
  - Above-ground stocks? Perception is they are high
- It's got a lot to do with above-ground stocks!

