

The Latest Situation of Japanese Tungsten Market in 2008/2009

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1. Tungsten Import summary

- Import summary in 2008
- Comparison between 1998 and 2008
- Import summary by materials (~2008)
- Import summary by countries (~2008)
- Import of WC powder (~2008)
- Import in 2009 (after Crisis)

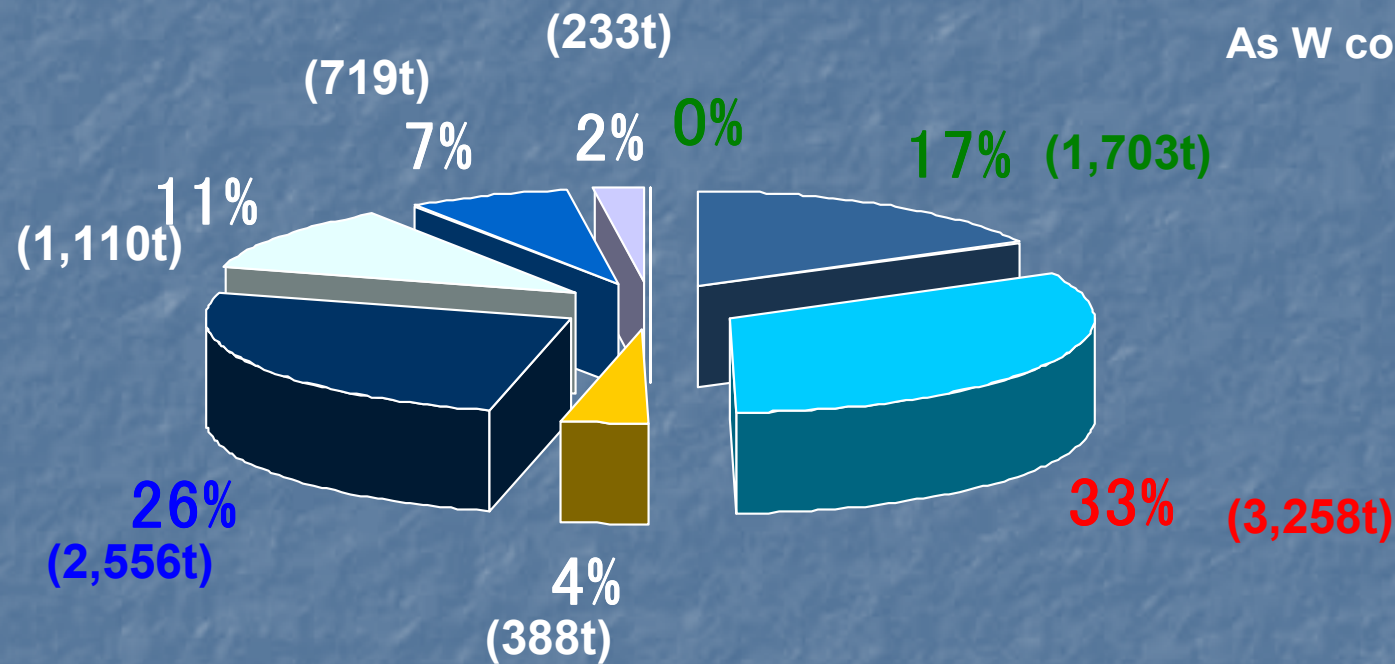
【Calculation base】

W-Conc.	: x 0.515 (x 65% x 79.3%)
APT	: x 0.702 (x 88.5% x 79.3%)
YTO/BTO	: x 0.793
FeW	: x 0.77
W-Powder	: x 1.0
WC	: x 0.93

1.1. Import summary in 2008

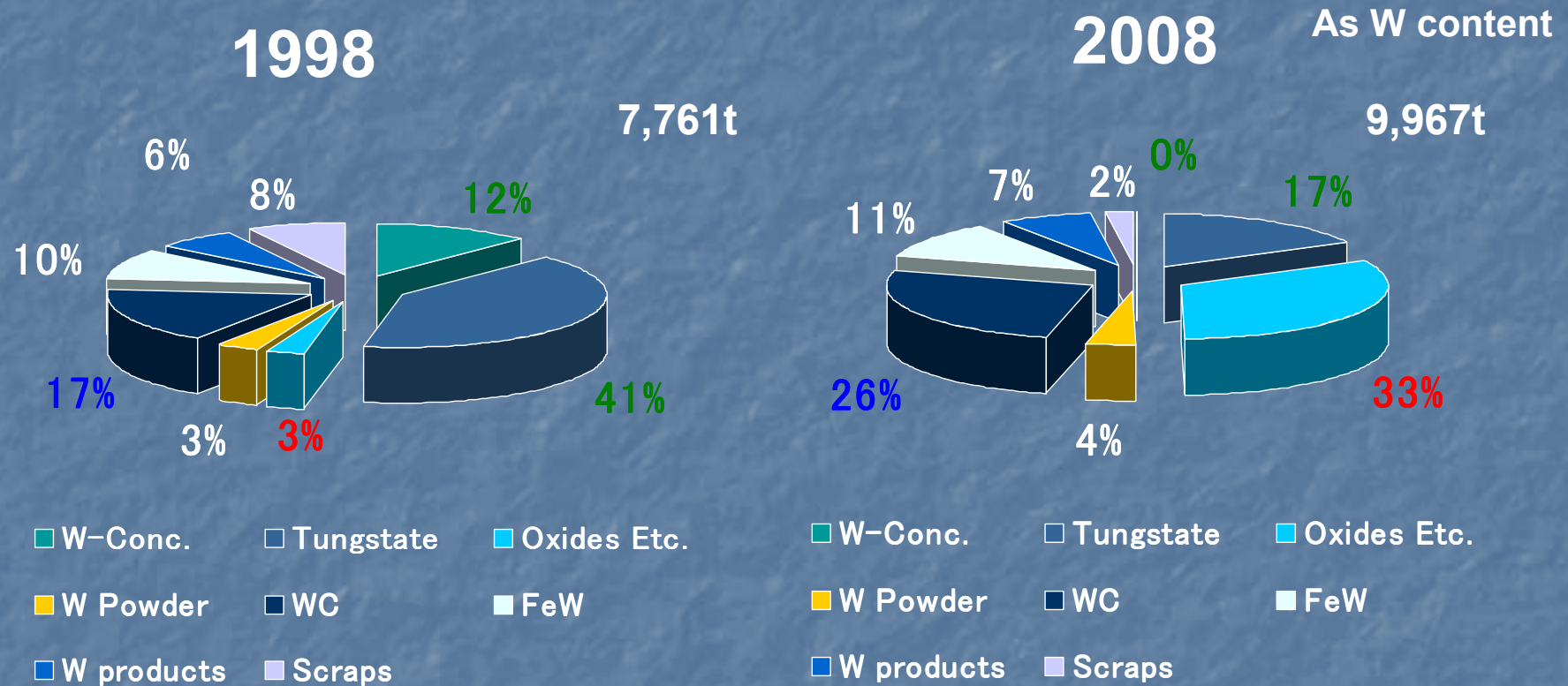
Total 9,967t

As W content



- W-Conc. □ Tungstate □ Oxides Etc.
- W Powder □ WC □ FeW
- W products □ Scraps

1.2. Comparison between 1998 and 2008



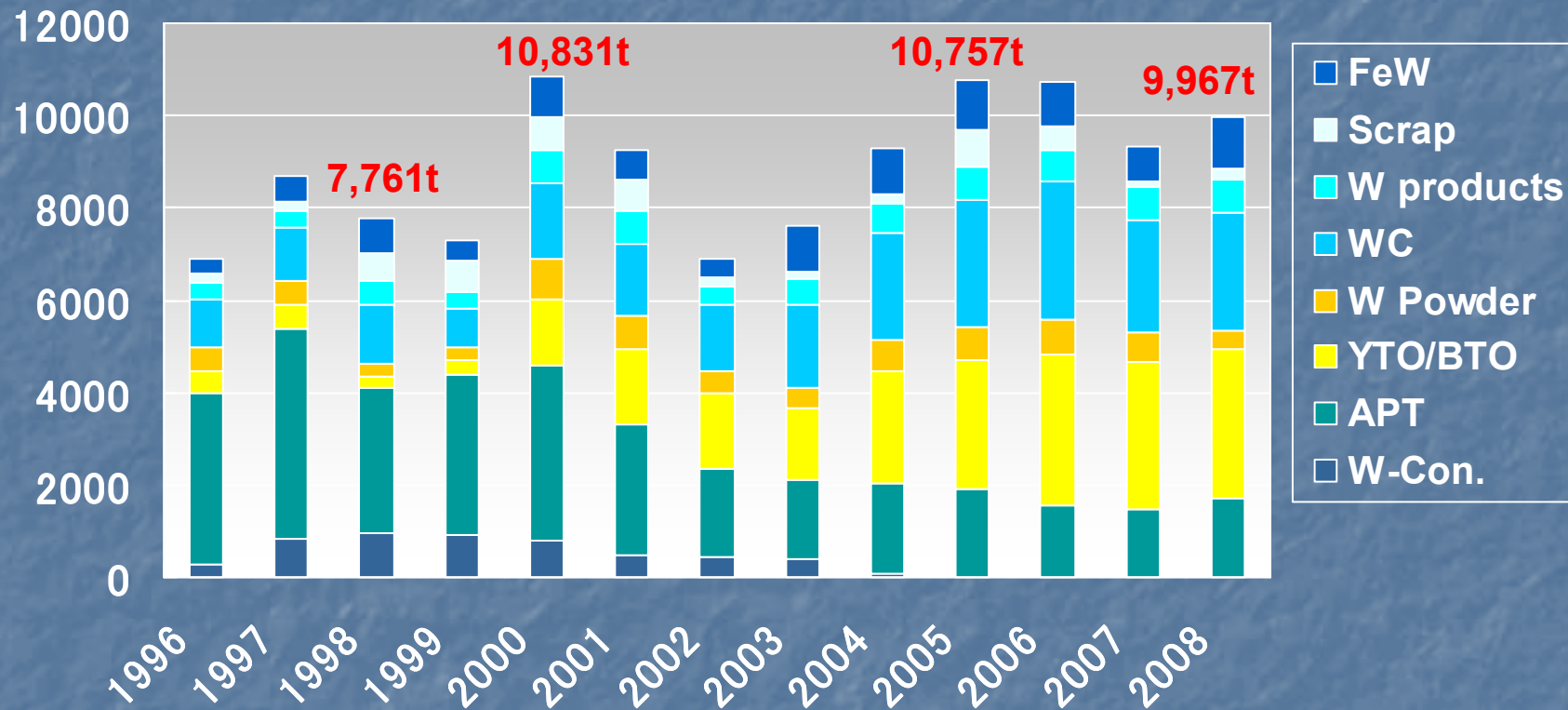
W-Conc.+ APT 53% → 17%

YTO/BTO 3% → 33%

WC 17% → 26%

1.3.Import Summary by materials

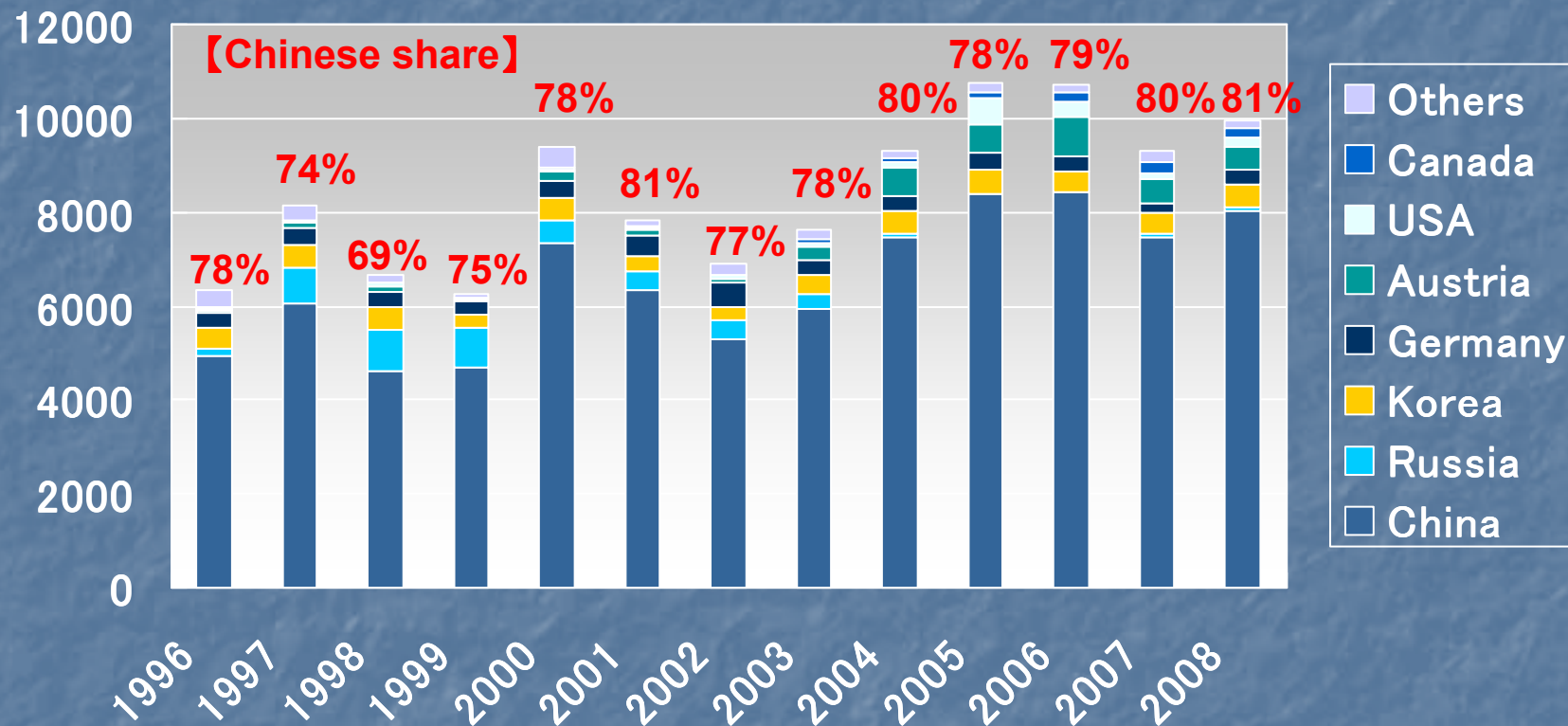
As W content (Mt)



APT	55.6%('96)	→	35.0%('01)	→	21.1%('04)	→	17.1%('08)
YTO/BTO	7.4%('96)	→	20.1%('01)	→	27.6%('04)	→	32.7%('08)
WC	16.8%('96)	→	16.8%('01)	→	25.1%('04)	→	25.6%('08)

1.4.Import Summary by countries

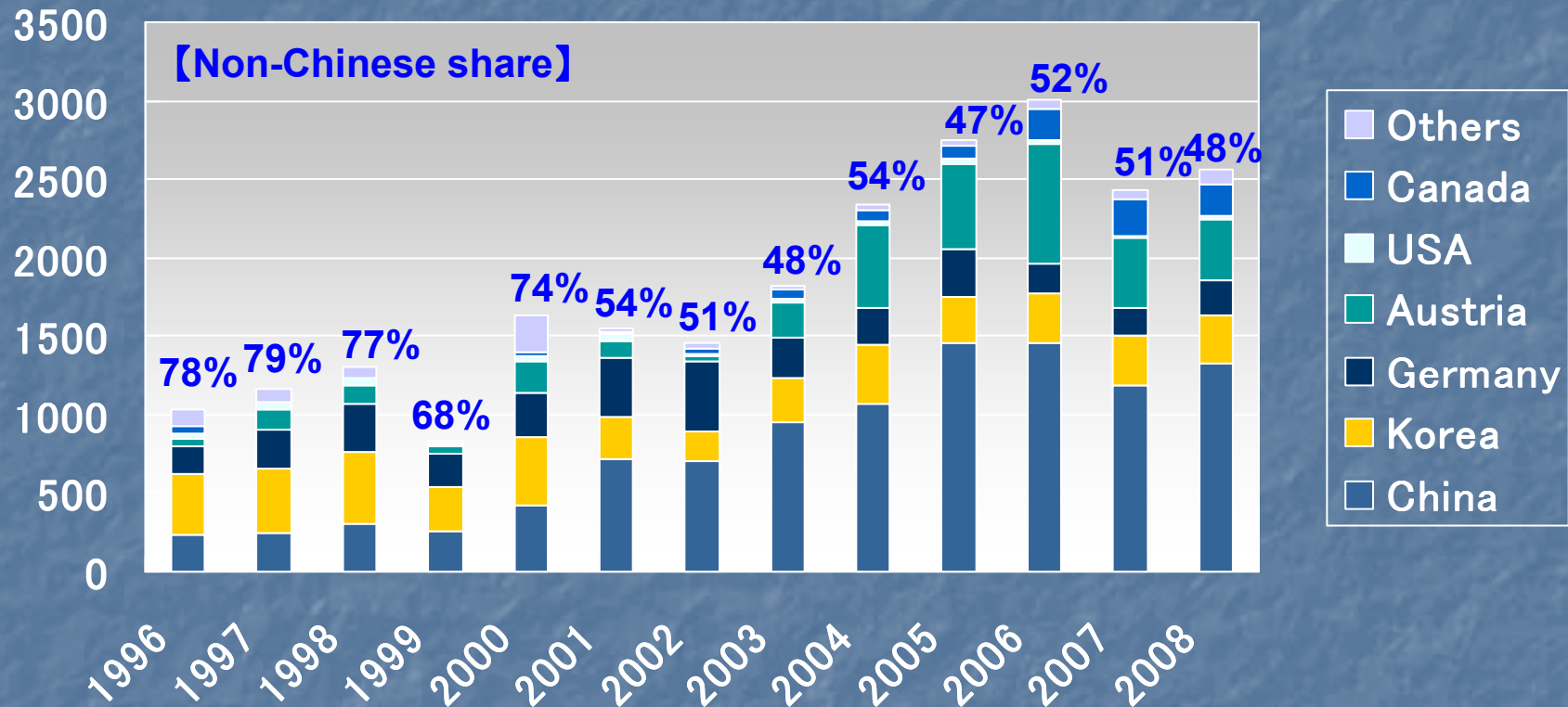
As W content (Mt)



No W-conc. Import. / Increase of Chinese share in WC import after 2001 (30% → 50%) made Chinese share in total import higher than 80%.

1.5.Import of WC powder

As W content (Mt)

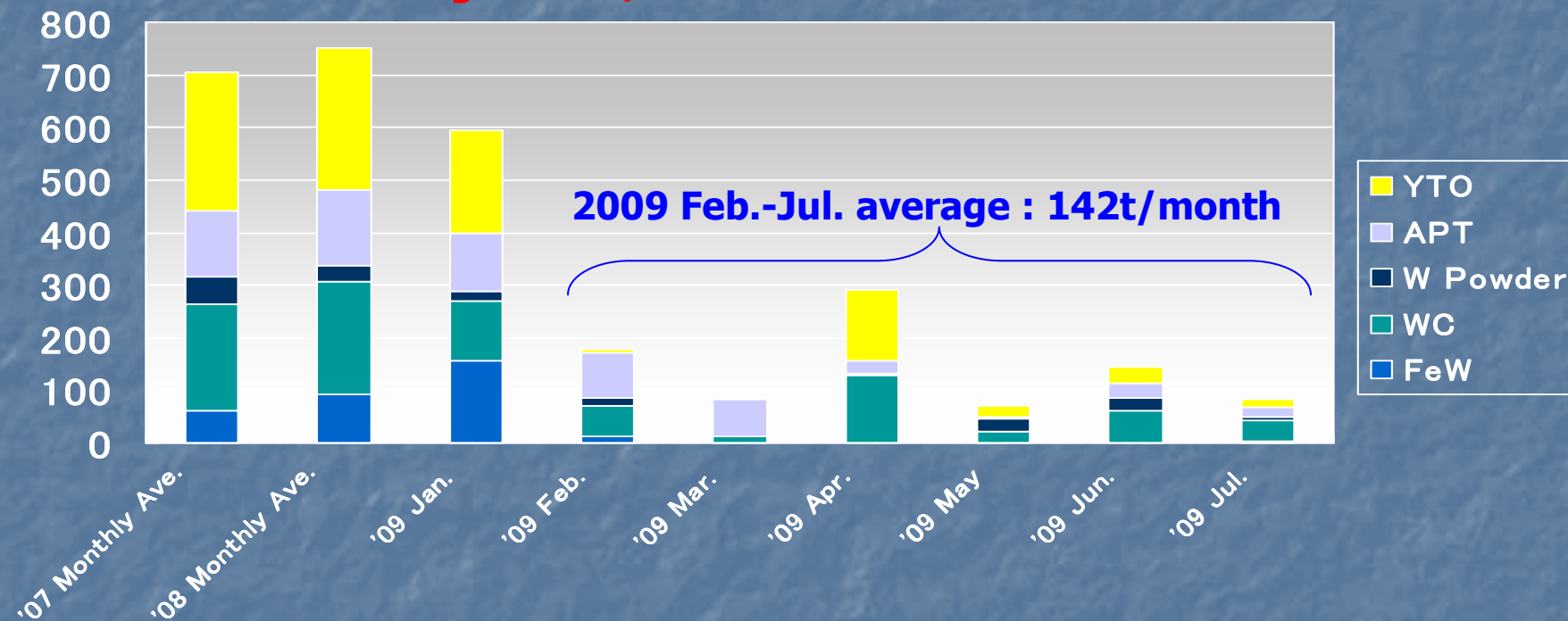


Still non-Chinese suppliers' share keeps 50%. Additionally to traditional suppliers like Korea and Germany, Austrian share is increasing rapidly.

1.6. Import in 2009 (after Crisis)

As W content (Mt)

2008 average : 752t/month



2008 monthly average : 752t

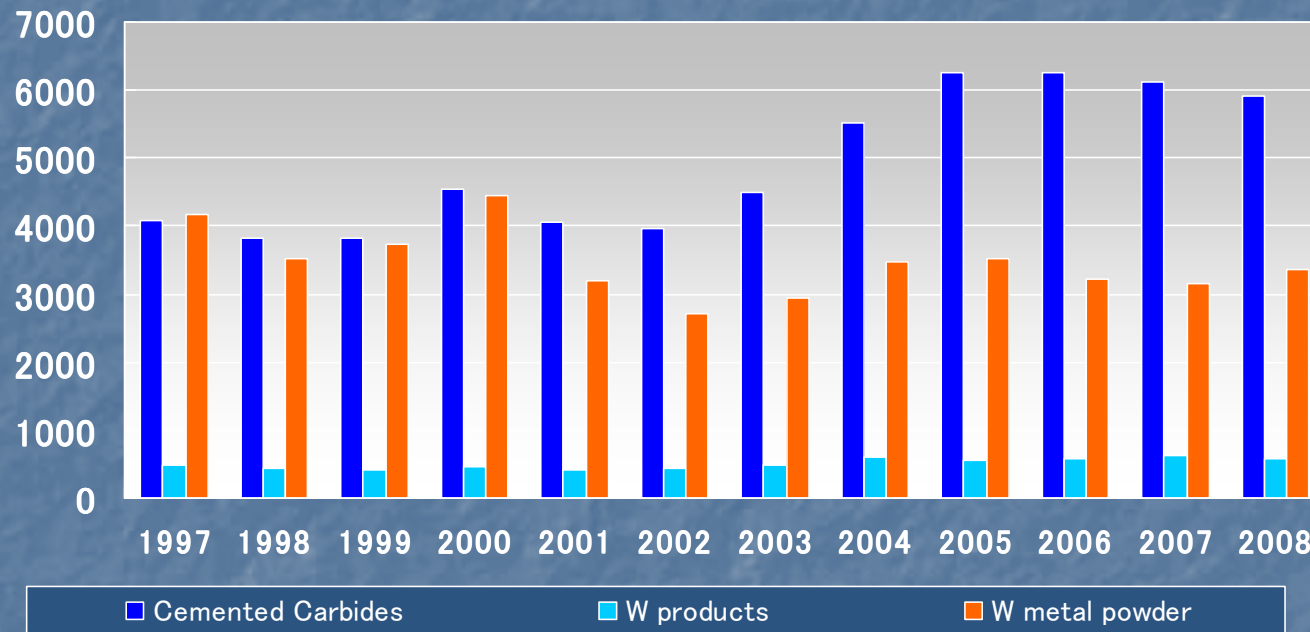
2009 Feb.-Jul. average : 142t (18.9% of 2008 average)

2. Tungsten production summary

- Tungsten production summary
- Tungsten powder production
- Tungsten powder production (monthly)
- Tungsten carbide production
- Tungsten carbide production (monthly)

2.1. Tungsten production summary

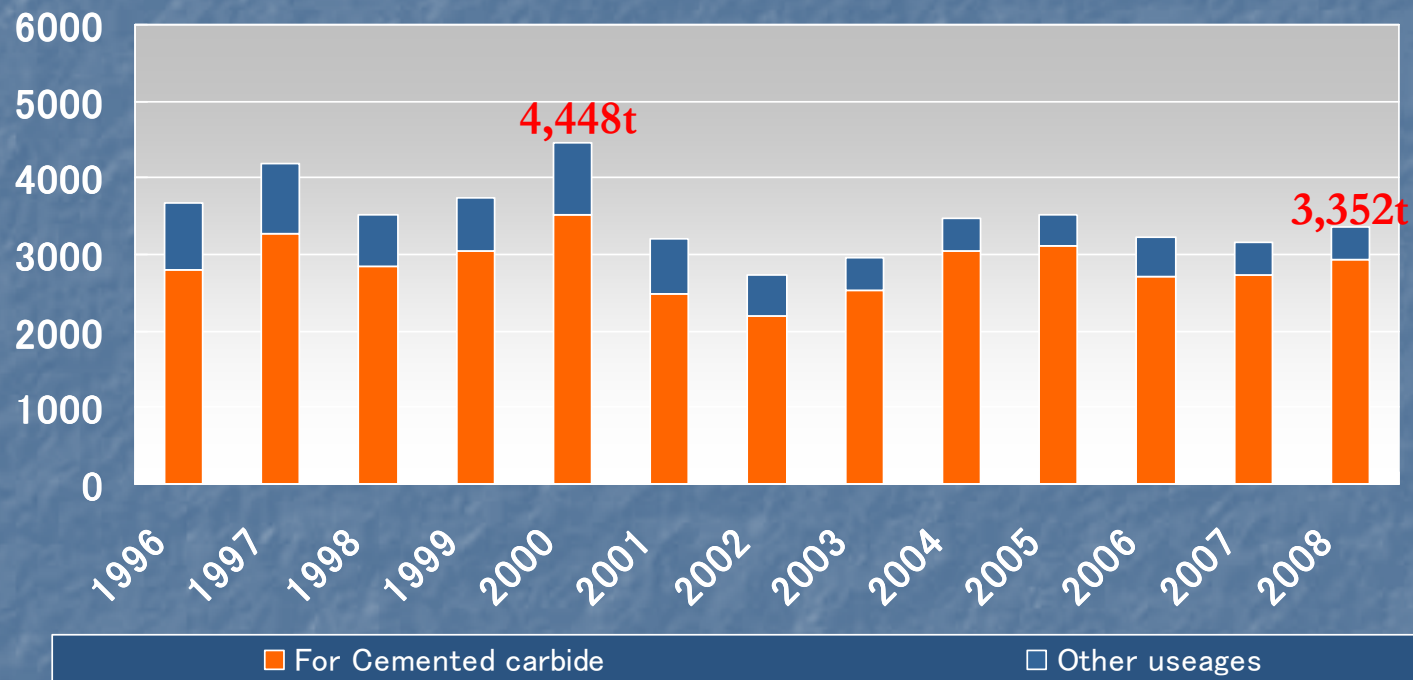
As W content (Mt)



Cemented carbides production keeps around 6,000t from 2005. W metal production keeps 3,500t level, W products : 600t level.

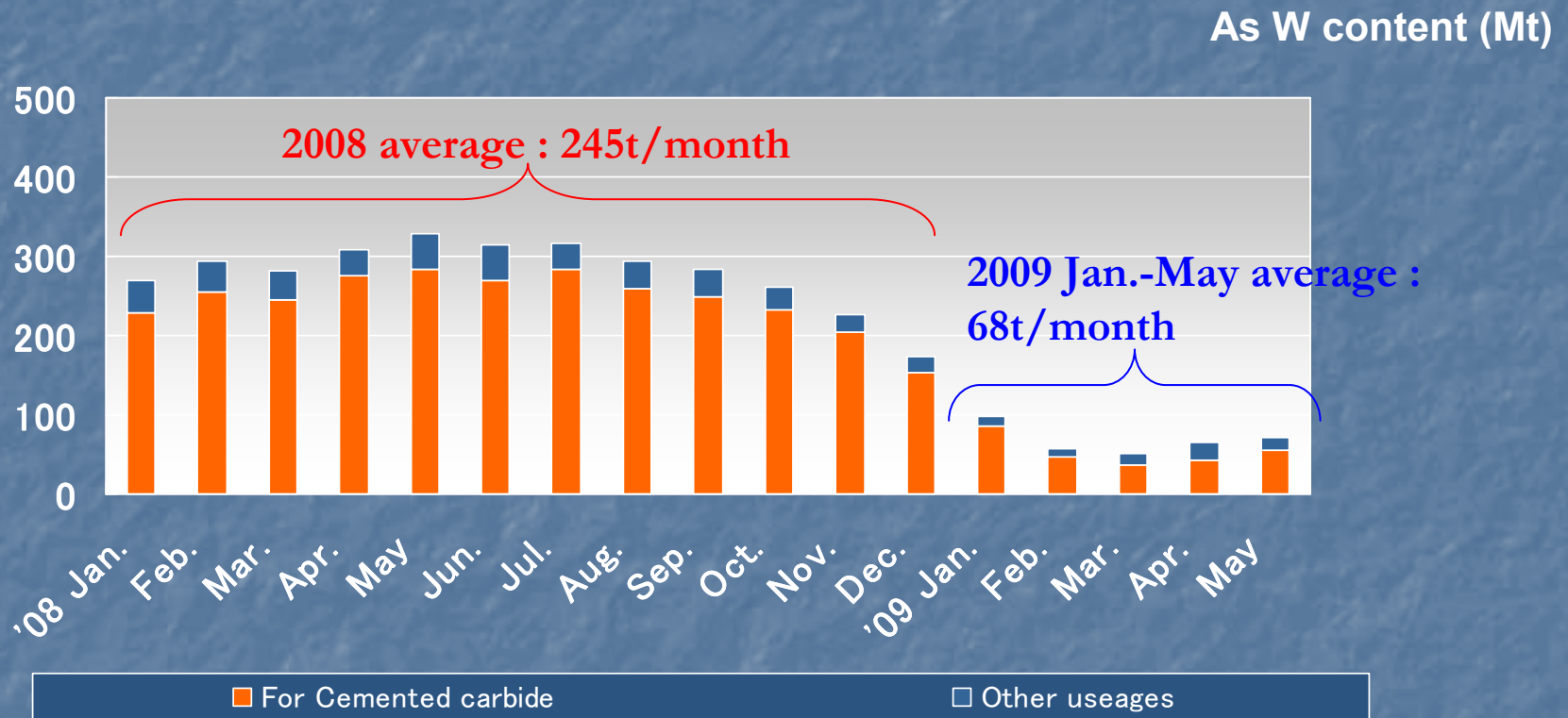
2.2. Tungsten powder production

As W content (Mt)



The record of Tungsten powder production is 4,448mt in 2000. After that total production is around 3,000 ~ 3,500mt.

2.3. Tungsten powder production (monthly)

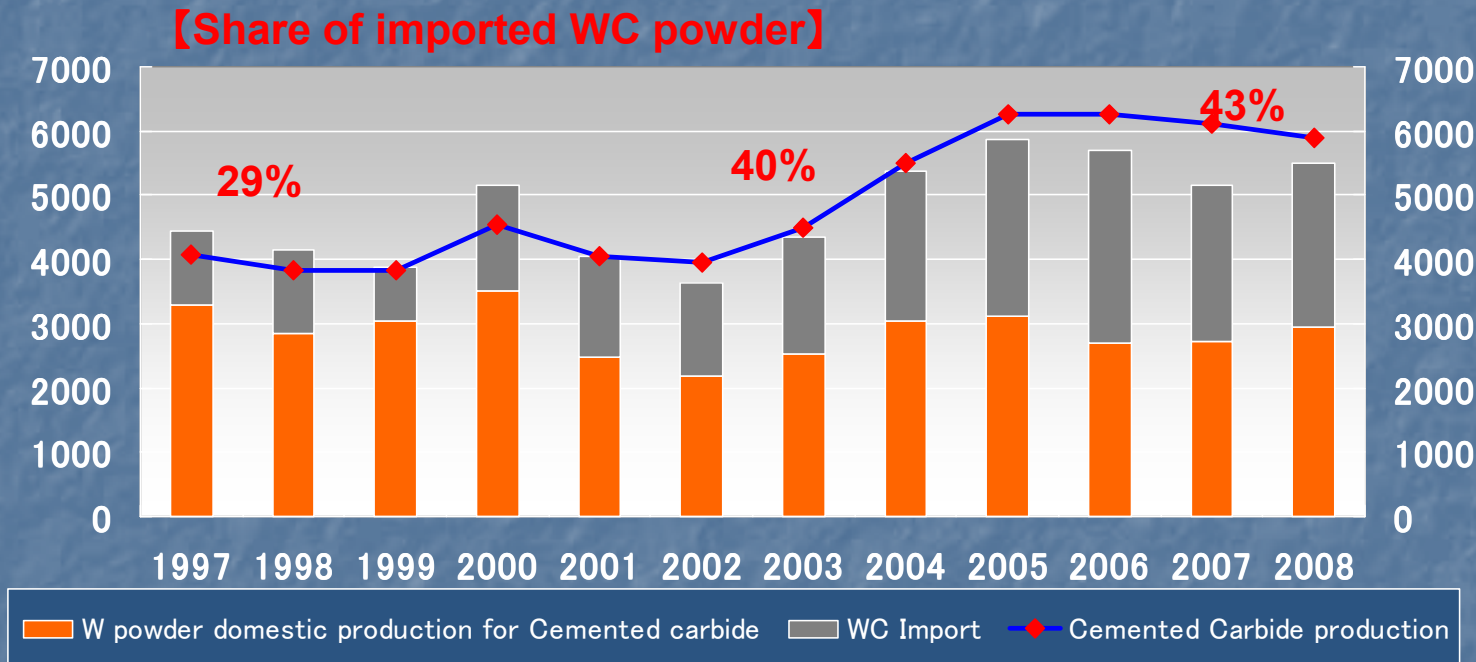


2008 monthly average : 245t

2009 Jan.-May average : 68t (27.8% of 2008 average.)

2.4. Cemented carbide production

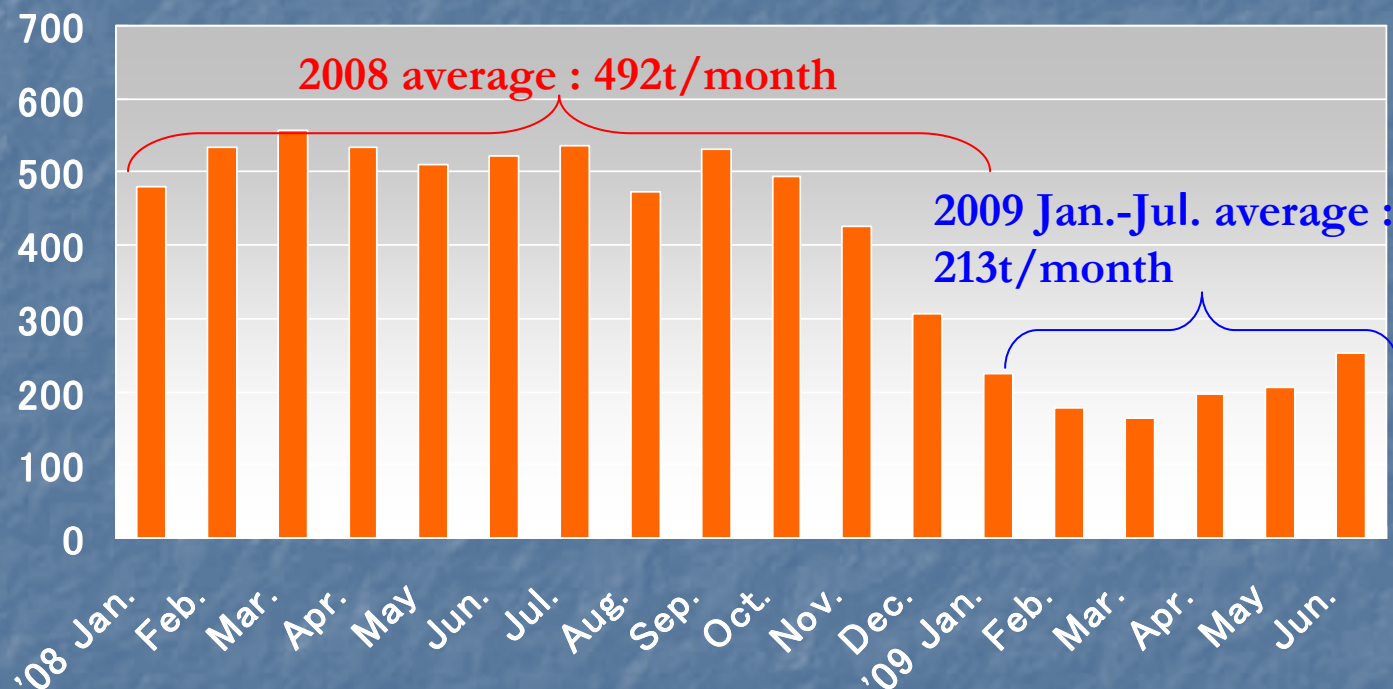
As W content (Mt)



Cemented carbide production keeps 6,000mt from 2005. But due to crisis, it decreased from 4th Q. 2008 and total 2008 production was 5,903t.

2.5. Cemented carbide production (monthly)

As W content (Mt)




2008 monthly average : 492t

2009 Jan.-Jul. average : 213t (43.3% of 2008 average)

3. Damage by Crisis


- How to damage to Tungsten ?
- Verification
- Damage to Japanese industries
- Monthly comparison of Cemented carbide production/shipment
- Japanese industries v.s. Cemented carbide

3.1.) How to damage to Tungsten?

- 
- Car sales down. → Car stocks up.
 - Car production down.
→ Cemented carbide stocks up.
 - Cemented carbide production down.
→ Tungsten carbide stocks up.
 - Tungsten carbide production down.
→ YTO/BTO stocks up.
 - Tungsten import down.

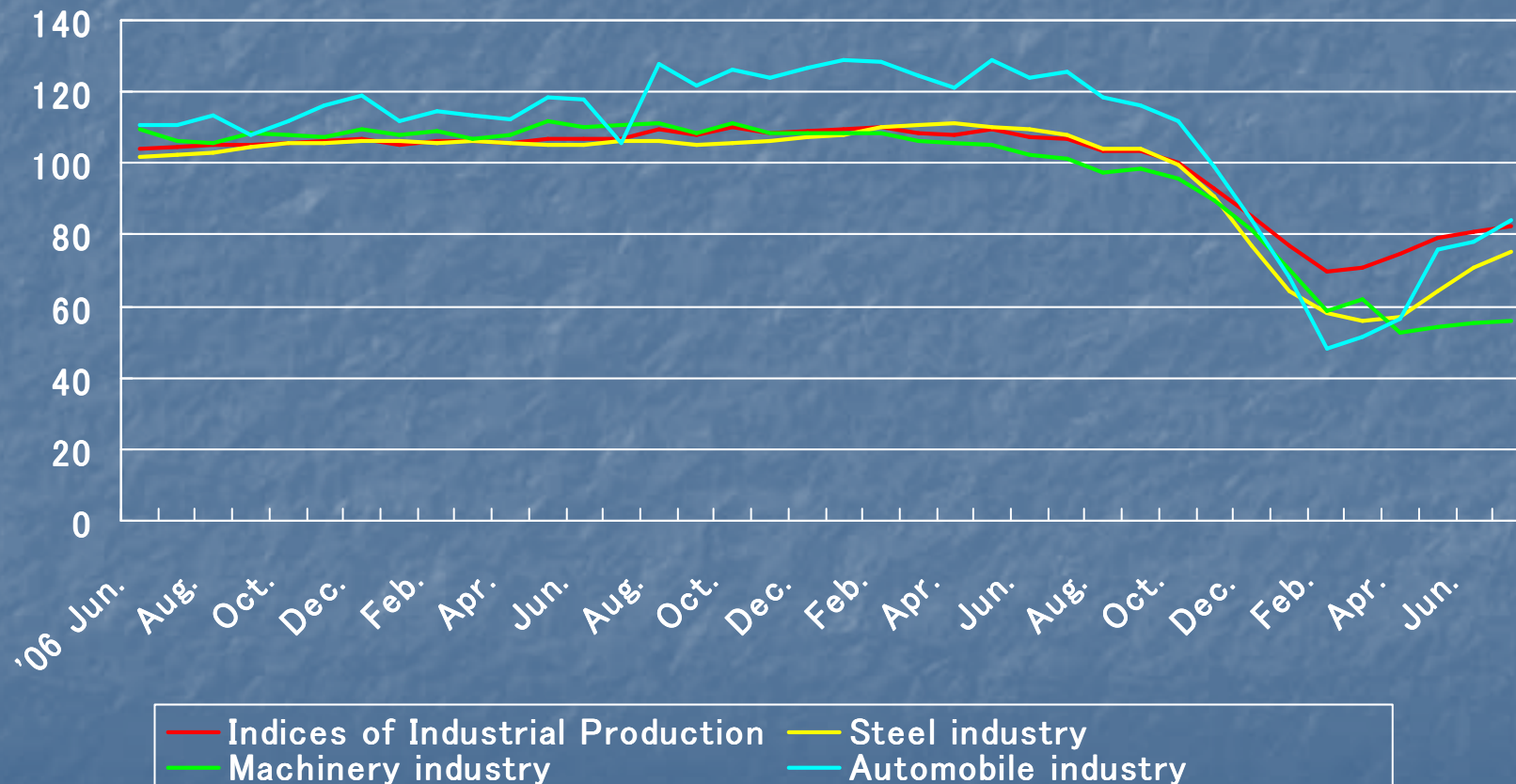
More Damage !!!

3.2.) Verification

- 
- Car Sales : ▲ 30%
 - Car Production : ▲ 40%
 - Cemented carbide production
 - 2008 average : 492t/month
 - 2009 Jan.-Jul. : 213t/month (▲56.7%)
 - Tungsten powder production
 - 2008 average : 245t/month
 - 2009 Jan.-May. : 68t/month (▲72.2%)
 - Tungsten import
 - 2008 average : 752t/month
 - 2009 Feb.-Jul. : 142t/month (▲81.1%)

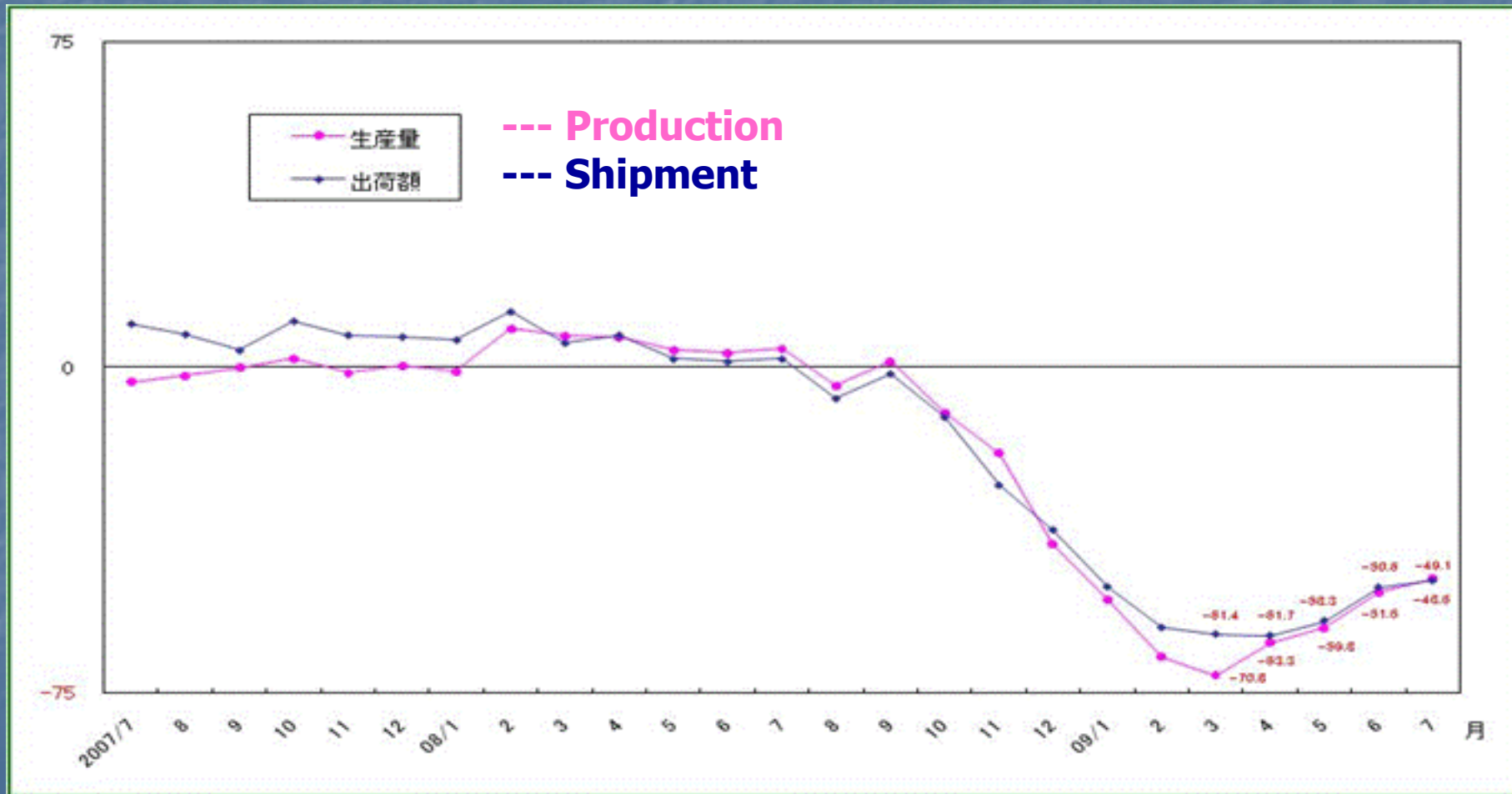
More Damage !!!

3.3.) Damage to Japanese industries



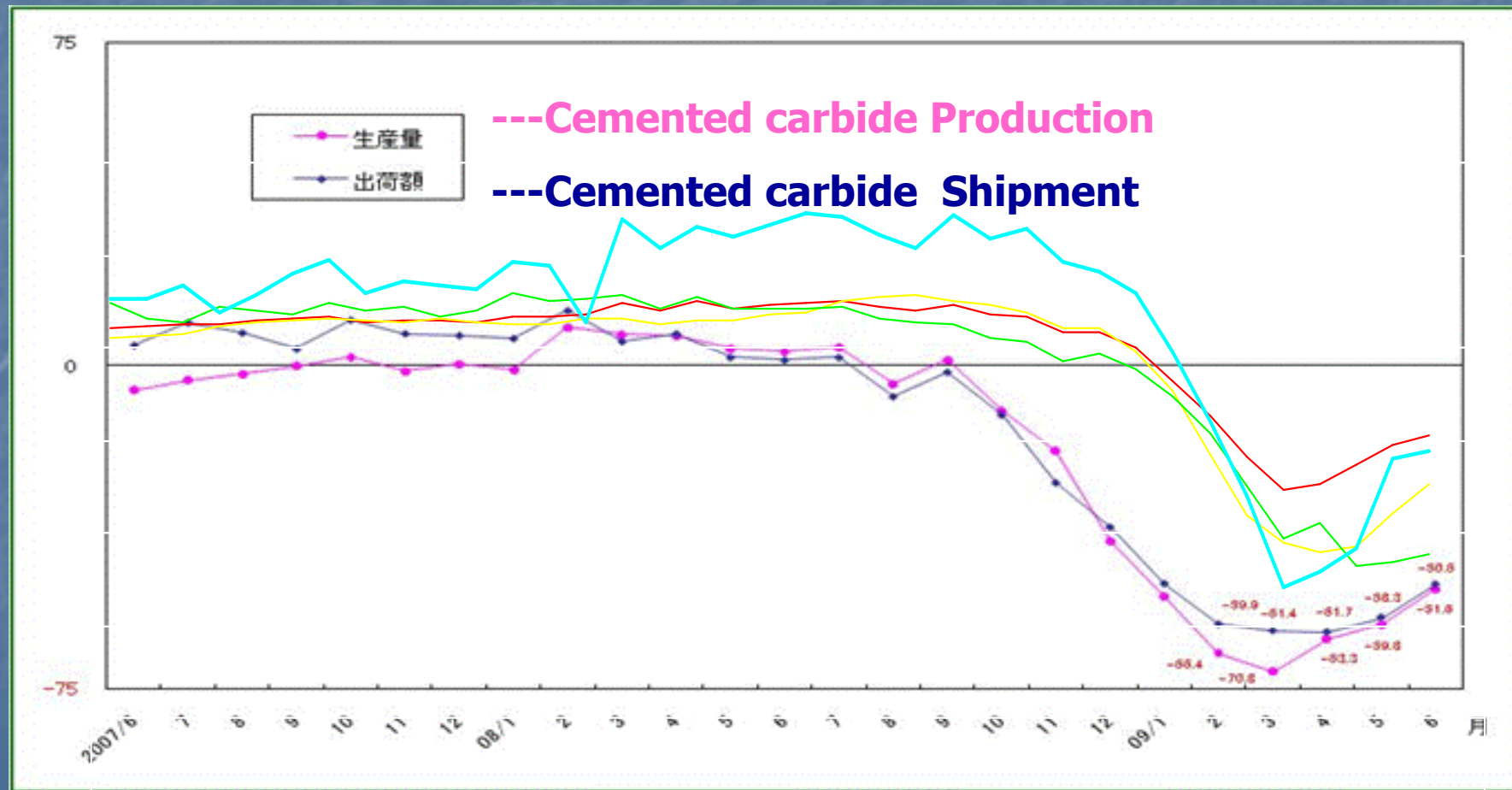
※ 2005 average : 100

3.4.) Monthly comparison of cemented carbide production/shipment



Source : Japan Cemented Carbide Tools Manufactures' Association.


3.5.) Japanese industries v.s. Cemented carbide



4. Symptoms of recovery

- How to recover Tungsten ?
- Recovery of car sales
- Recovery of car production
- Recovery of cemented carbide

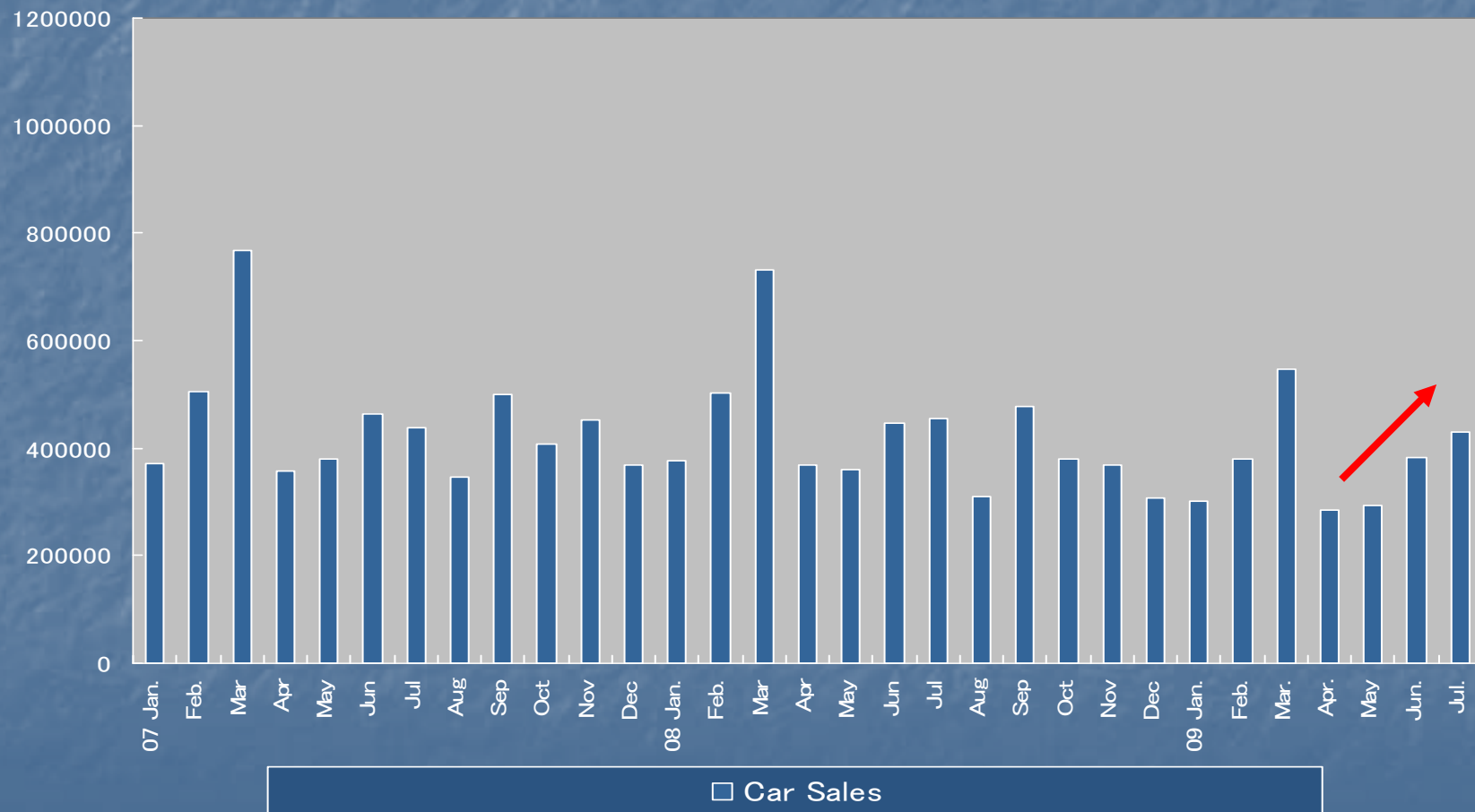
4.1.) How to recover Tungsten ?

- 
- Car sales up. → Car stocks down.
 - Car production up.
→ Cemented carbide stocks down.
 - Cemented carbide production up.
→ Tungsten carbide stocks down.
 - Tungsten carbide production up.
→ YTO/BTO stocks down.
 - Tungsten import up.

Coming soon ???

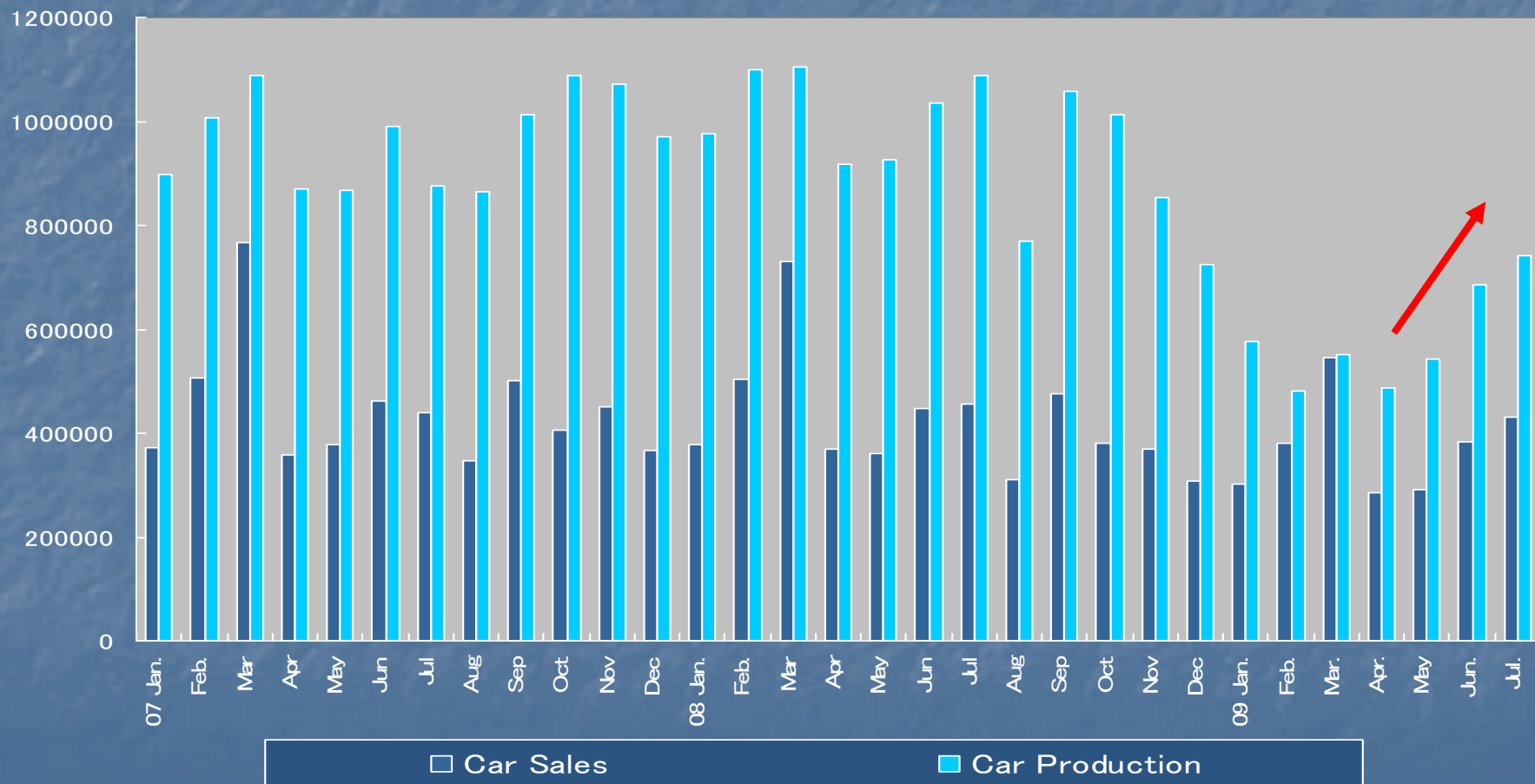
4.2.) Car sales recovery

[Unit : pcs]



4.3.) Car production recovery

[Unit : pcs]

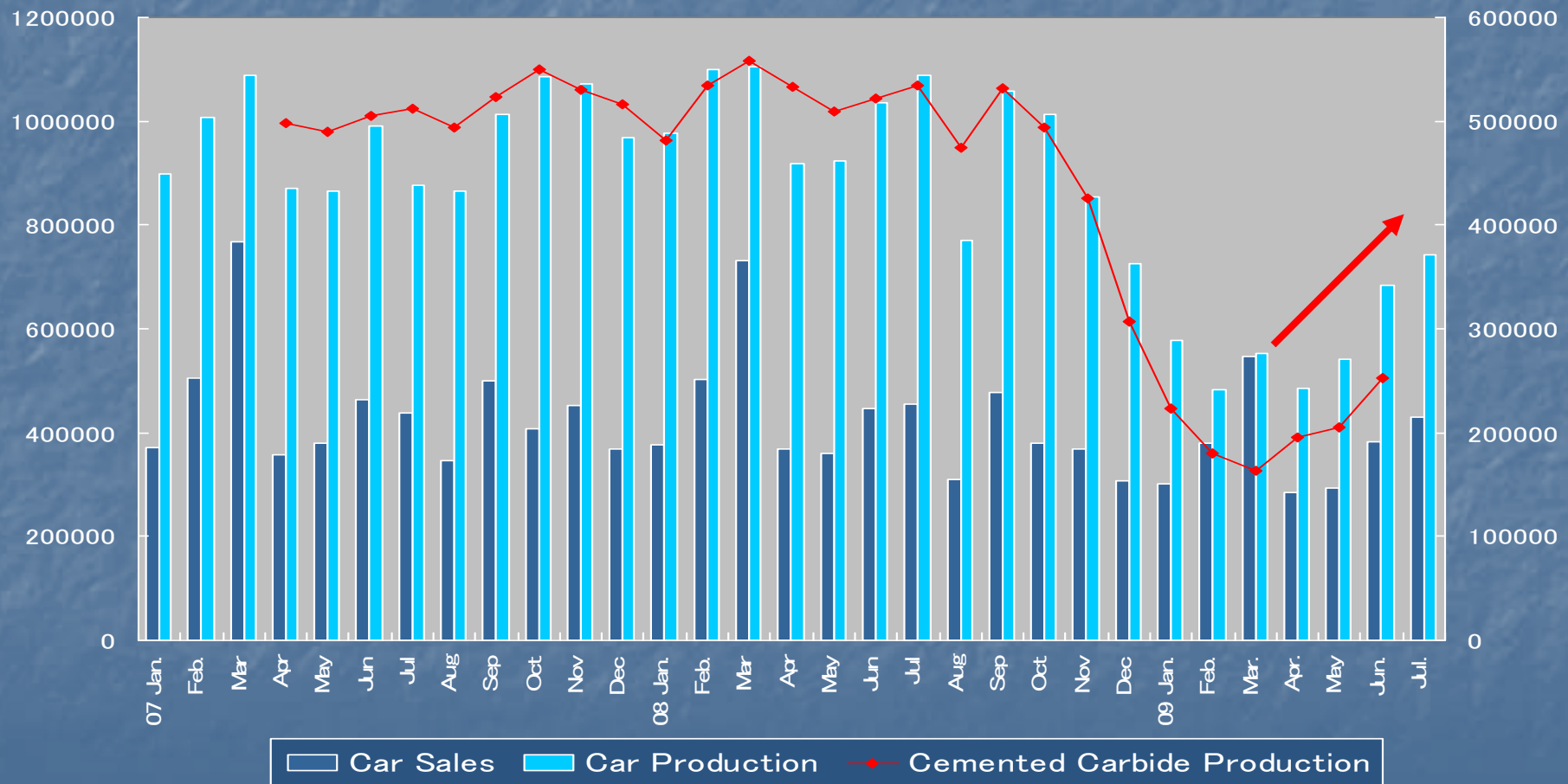


4.4.) Cemented carbide recovery

[Unit : pcs]

[Unit : kg]

(Cemented Carbide Production)



5. Conclusions

~Current situation (in Crisis)~

- Crisis damaged Japanese tungsten industry seriously.
- Damage became more seriously like Tsunami from final products to raw material. Japanese tungsten import almost stopped after crisis till now.
- Recovery of car industry is going on. We can expect soon recovery of cemented carbide.
- It will take time to see real recovery. But already the worst situation was over.

5. Conclusions 2

~middle-long terms (after Crisis)~

- I appreciate tungsten suppliers for adjustment of production according to dead demand due to crisis.
- After the real recovery of demand, consumers will face to same problem before crisis to diversify suppliers/supply countries.
- Additionally to developments for high value-added products, more efforts for diversification like developments of new deposits and recycle systems, and transfer of technologies specially to up-stream fields will be requested for stabilization of Japanese tungsten industry.



Thank you for kind
attention !!!

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