

# **Overseas Market Conditions of Construction and Mining Equipment**

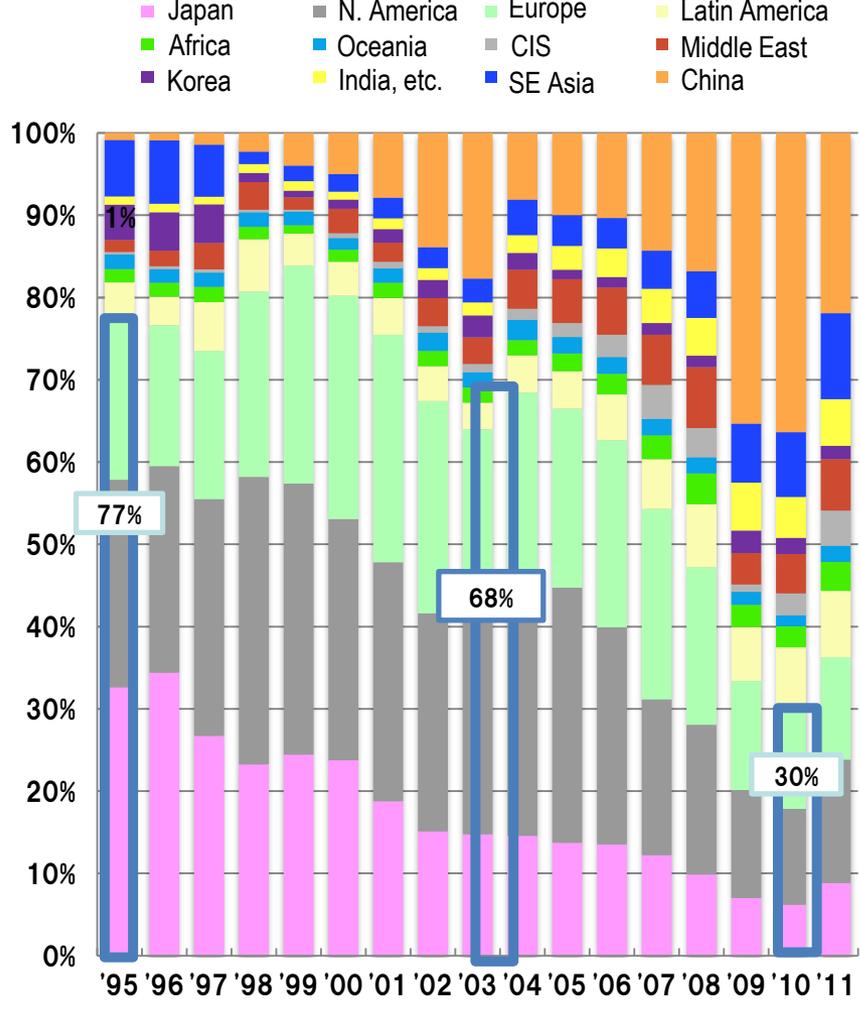
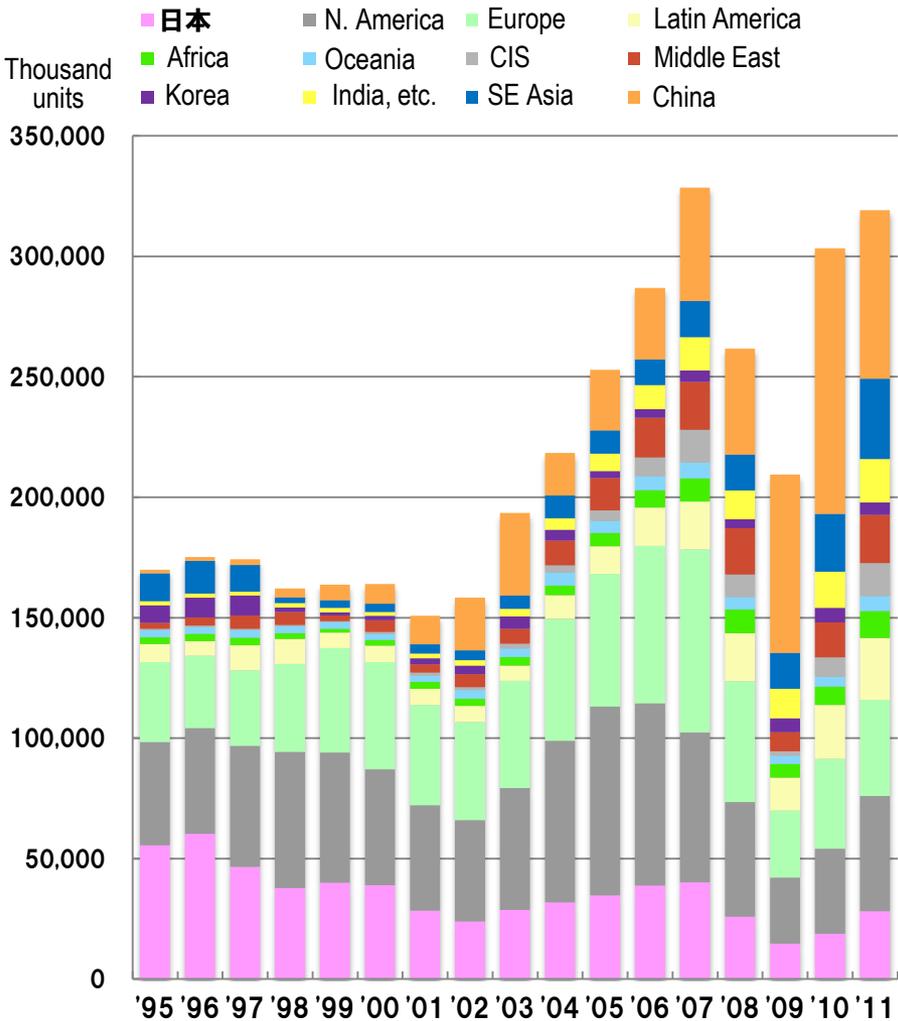
**December 17, 2012**

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Senior Executive Officer  
President of Construction and Mining  
Marketing Division  
Komatsu Ltd.**

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|---|------------------|
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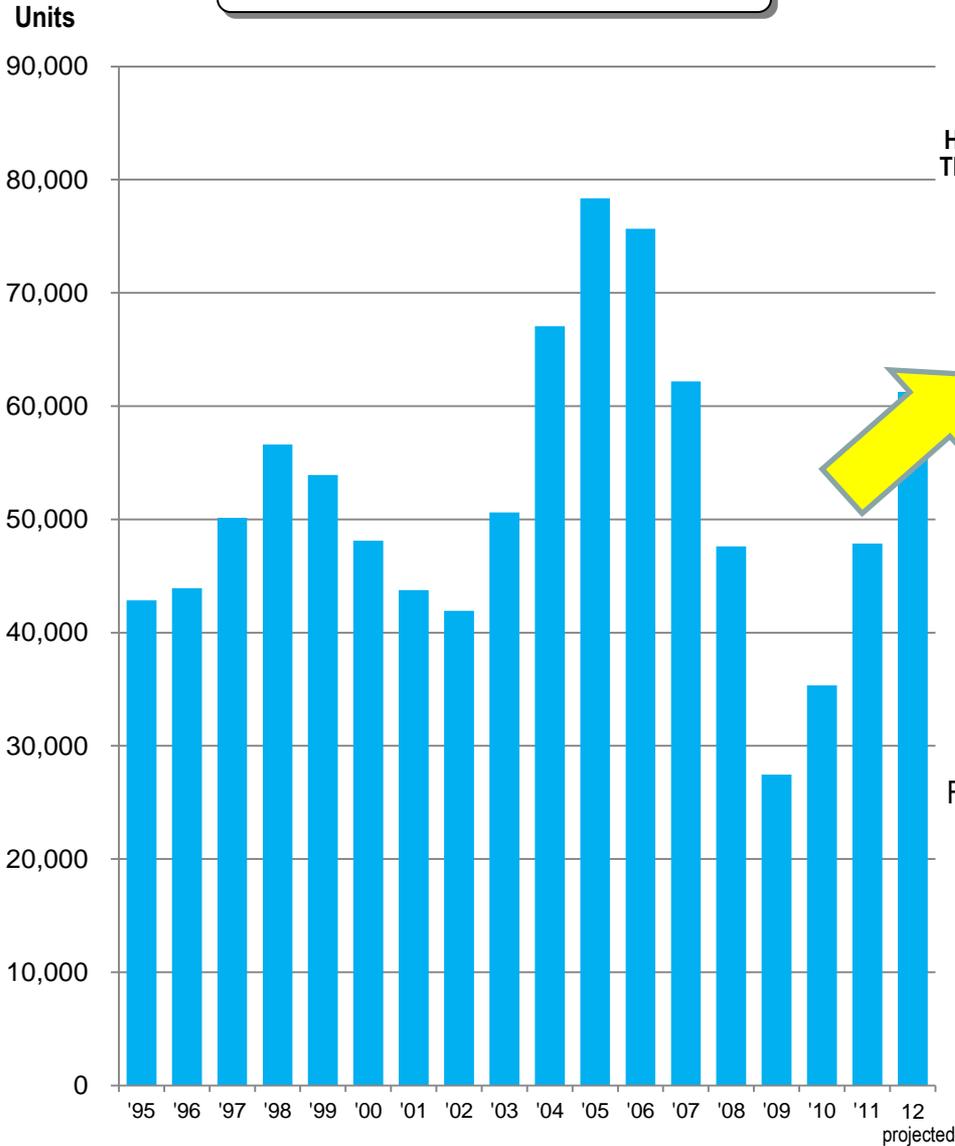
**Demand by region**

**Percent of demand by region**

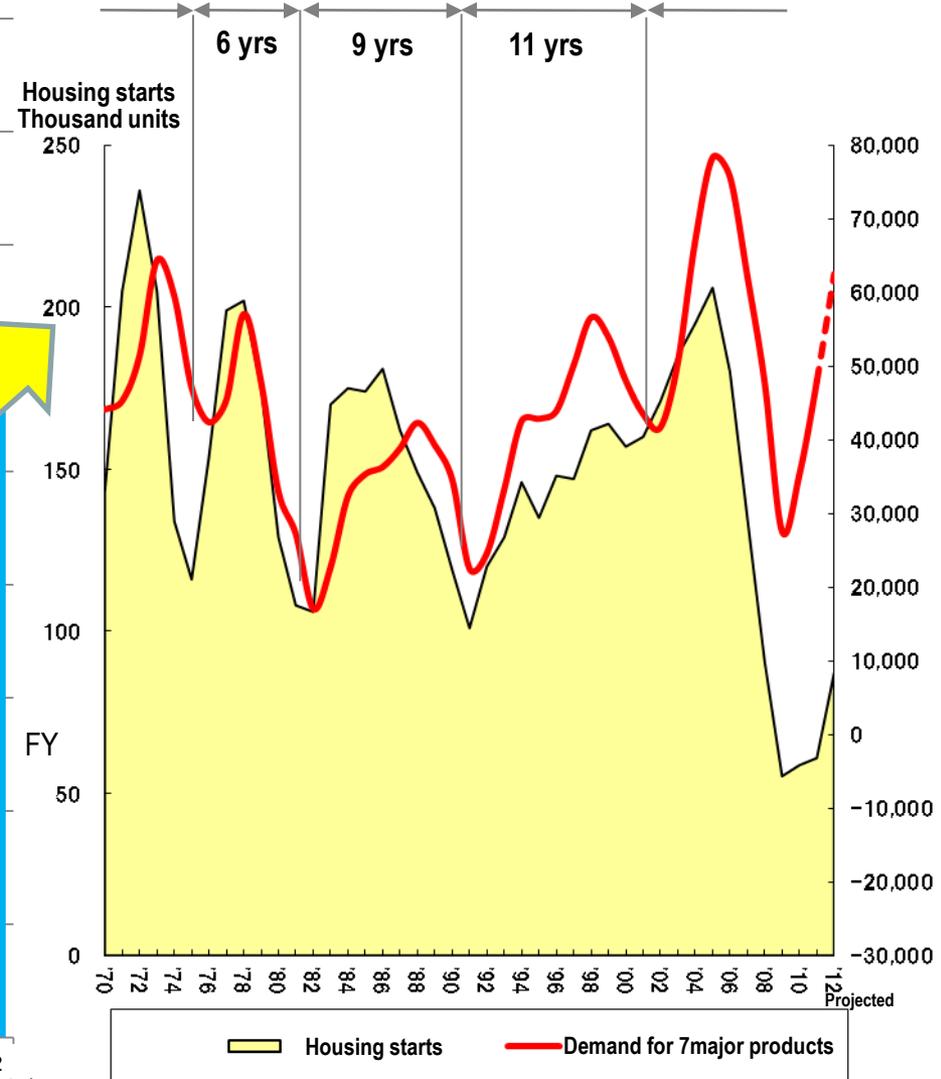


Seven major products (exc.. mini equipment): Crawler-type hydraulic excavators, wheel-type hydraulic excavators, bulldozers, wheel loaders, rigid dump trucks, articulated dump trucks, and motor graders.

**Demand for 7 major products**

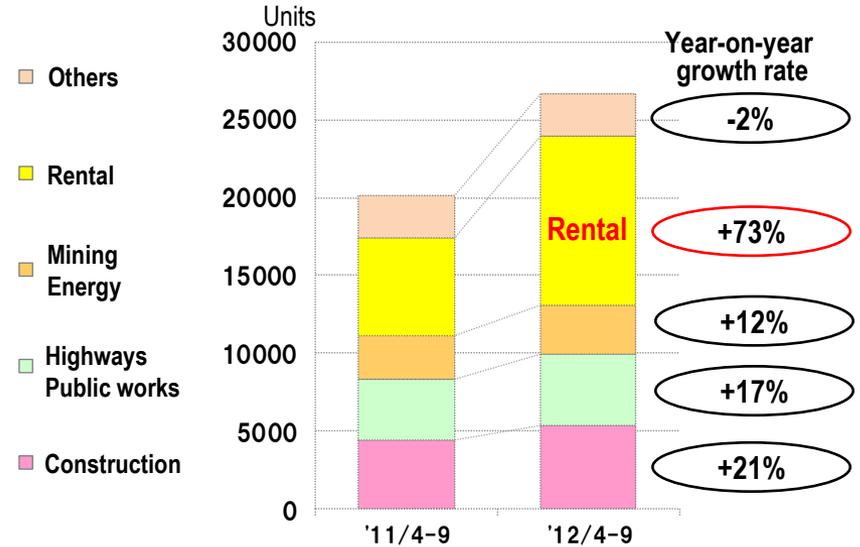


**Demand for 7 major products and U.S. housing starts**



U.S. Housing Starts: U.S. Dept. of Commerce (Projection for 2012: Annualized figure based on Sep. 2012)  
 Demand for 7 major products: Estimated by Komatsu

## Breakdown of demand by industrial segment (Unit basis)

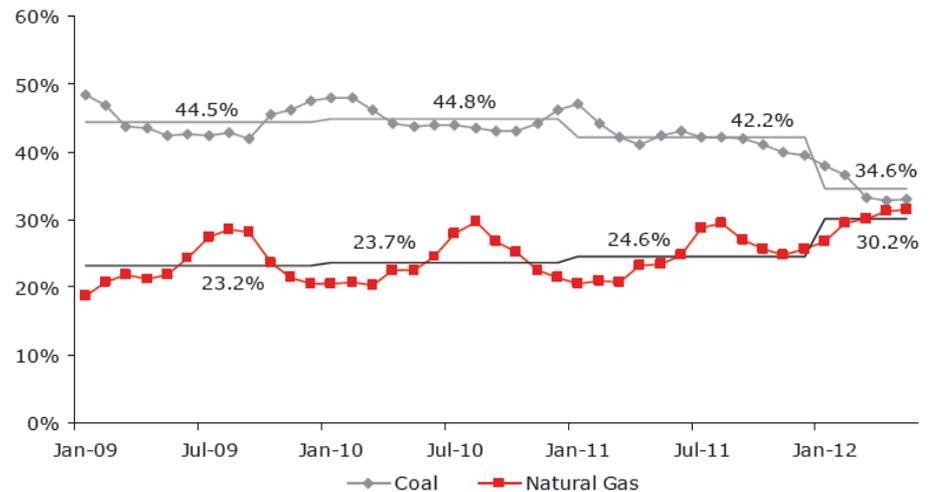


Change in energy source in the U.S.



Shifting from thermal coal to natural gas driven by shale gas

## Percentage of coal vs. natural gas in power generation



## Construction of shale gas well

- Clear forests and mountains and develop flat land.
- Build access roads to the developed sites.
- Install drilling equipment.
- Build ponds to discharge water.
- Remove drilling equipment to complete construction of wells and then redevelopment of adjacent land.

Characteristics of construction equipment for use in the shale gas drilling method:

- 1) Smaller machines
- 2) Short construction period

**Expanding rental demand**



Develop infrastructure by clearing forests

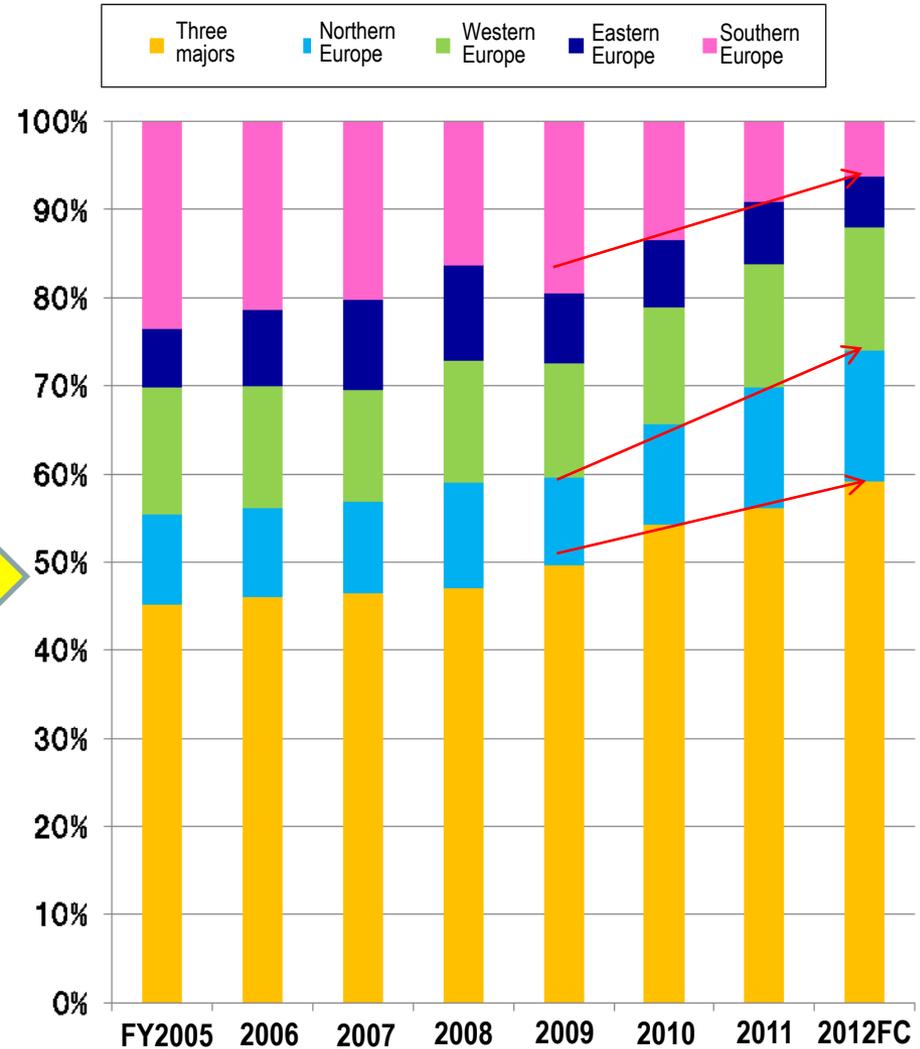
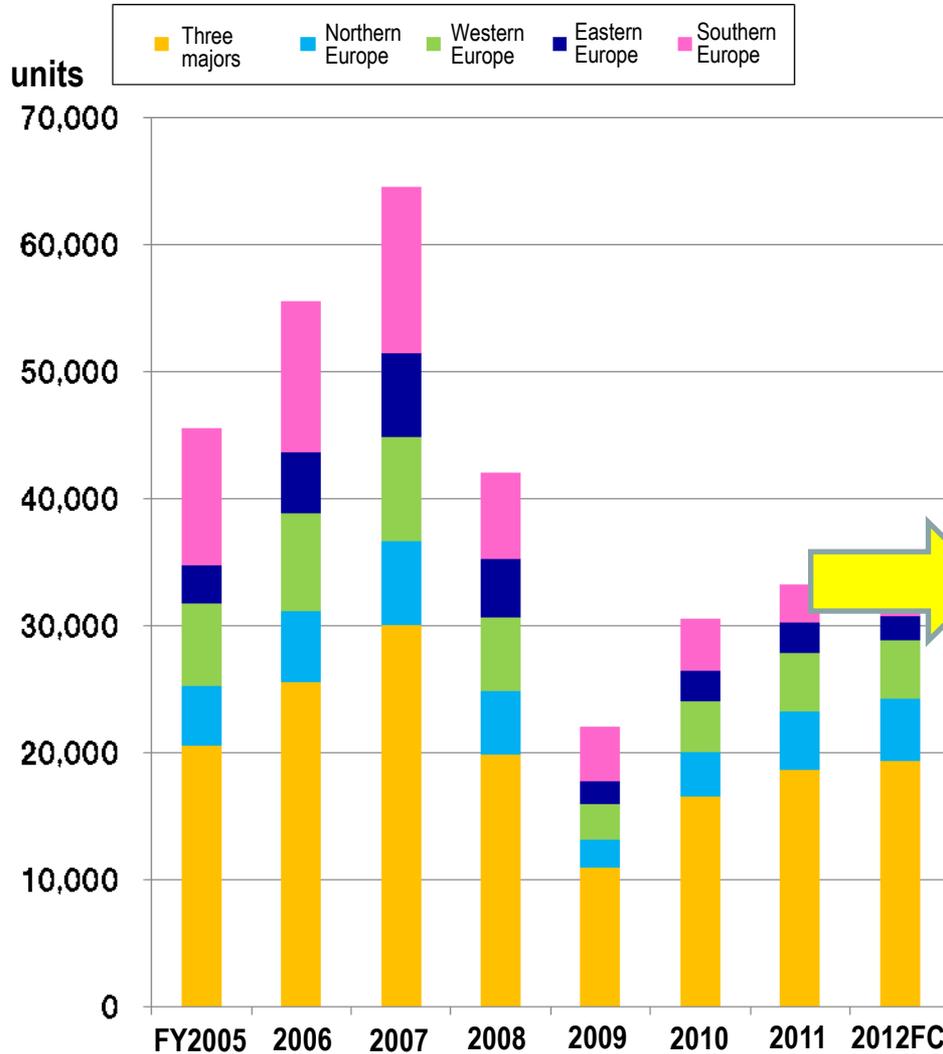
Drilling equipment

Pond for discharged water

Access road

### Demand for 7 major products by region

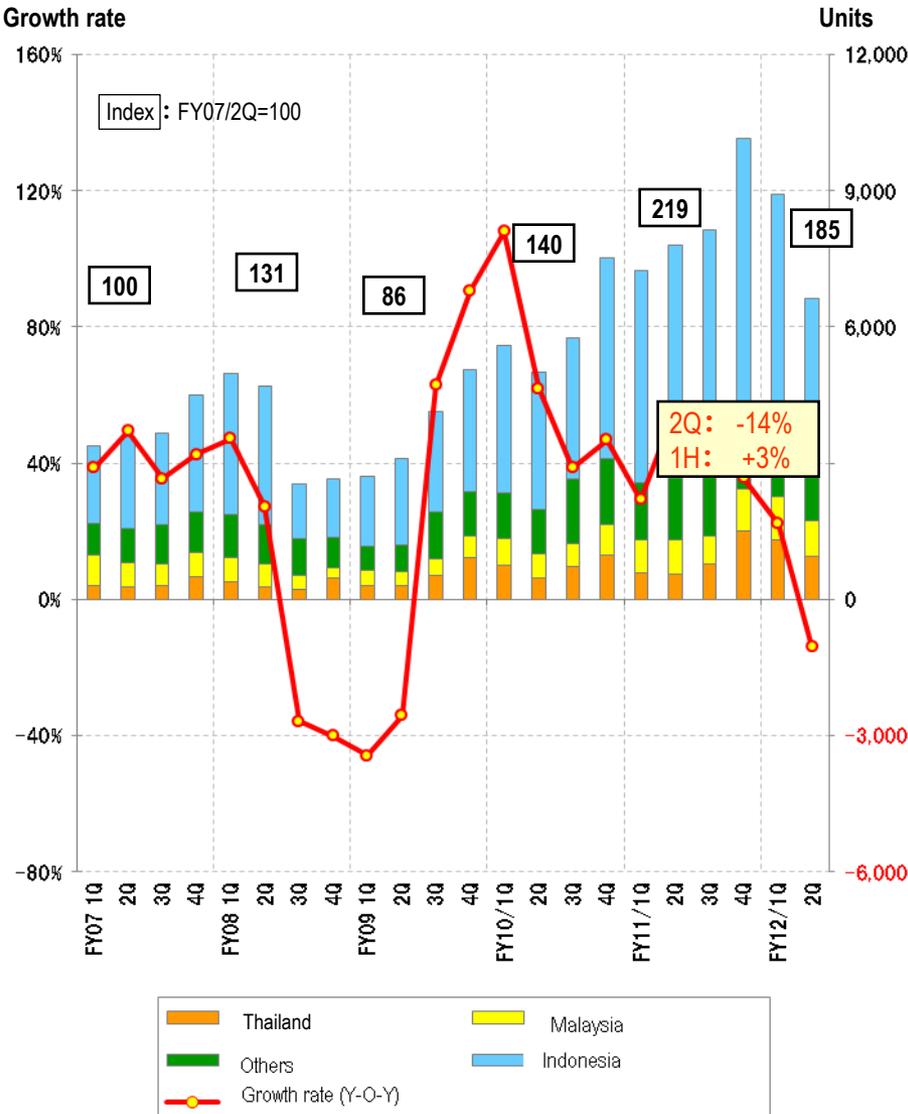
### Percent of demand for 7 major products



3 major markets: U.K., France & Germany. Northern Europe: Norway, Sweden, Finland & Denmark. Southern Europe: Spain, Portugal, Italy & Greece. Western Europe: Western countries other than above. Eastern Europe: Eastern countries

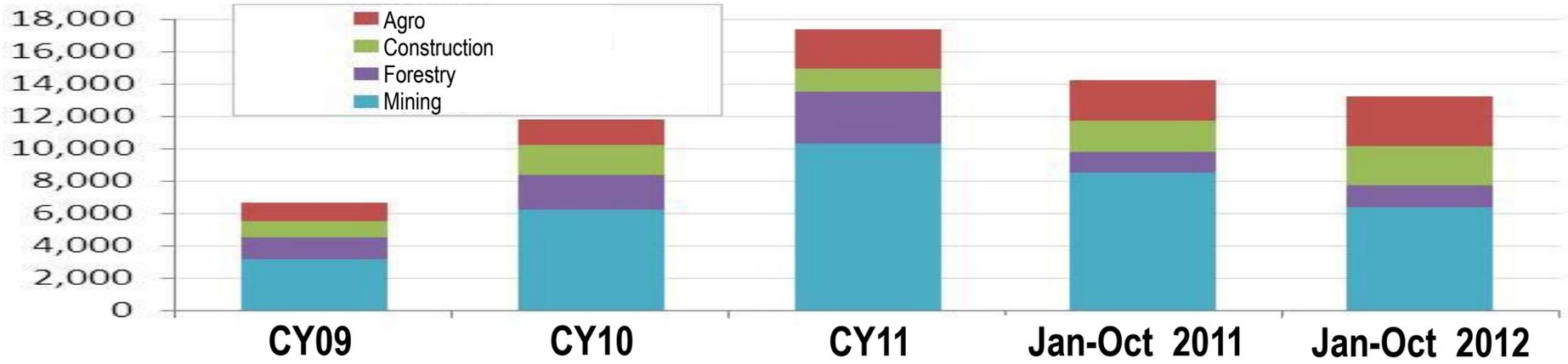
## Quarterly demand for 7 major products

## Change in demand in major countries: Apr – Sep 2011 vs. Apr – Sep, 2012



Major markets	Change in total demand
Indonesia	-9.5%
Thailand	+95.6%
Philippines	+70.9%
Malaysia	+20.1%
Myanmar	-47.9%
<b>Southeast Asia (total)</b>	<b>+3.4%</b>

**Indonesia: Quarterly demand for 7 major products**



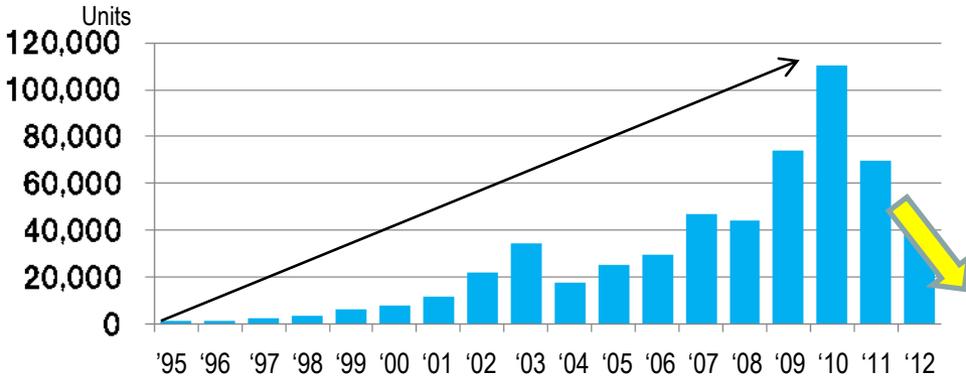
**Price of thermal coal**



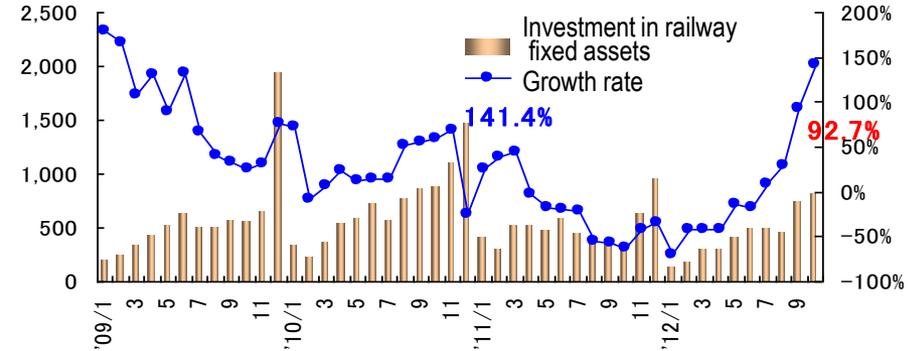
**Price of CPO (Crude Palm Oil)**



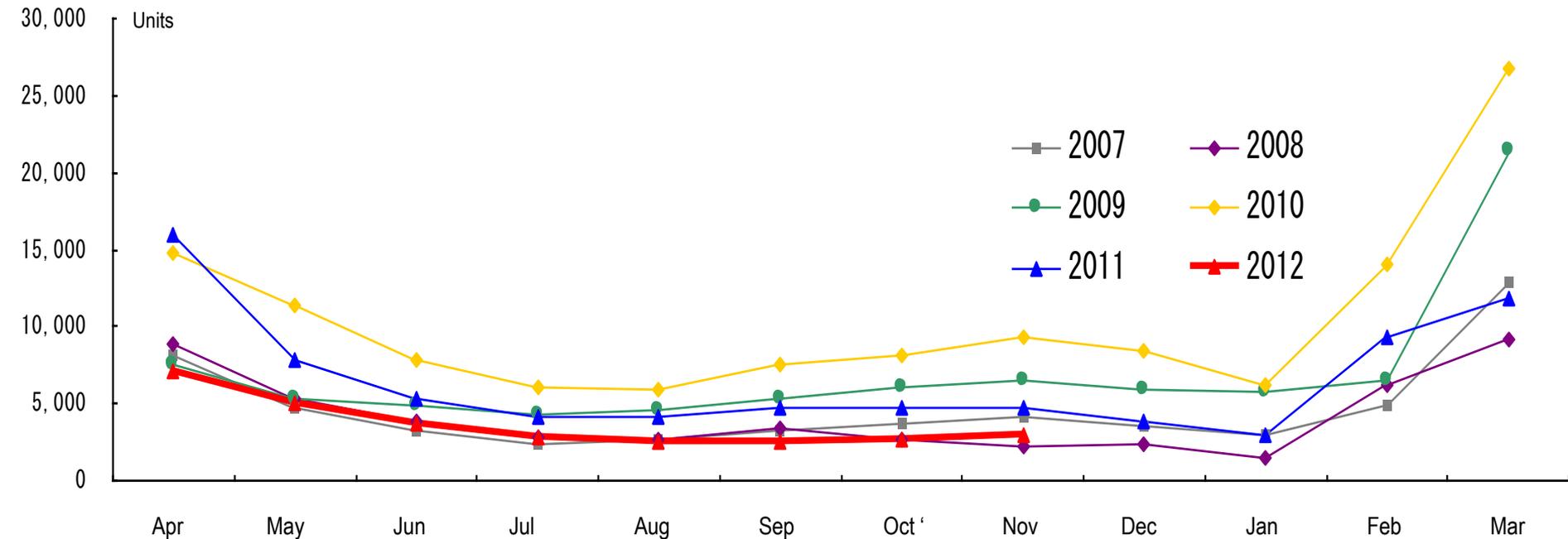
## Demand for 7 major products (foreign makers only)



## Investment in railway fixed assets



## Monthly demand for hydraulic excavators (6t & larger) (foreign makers only)

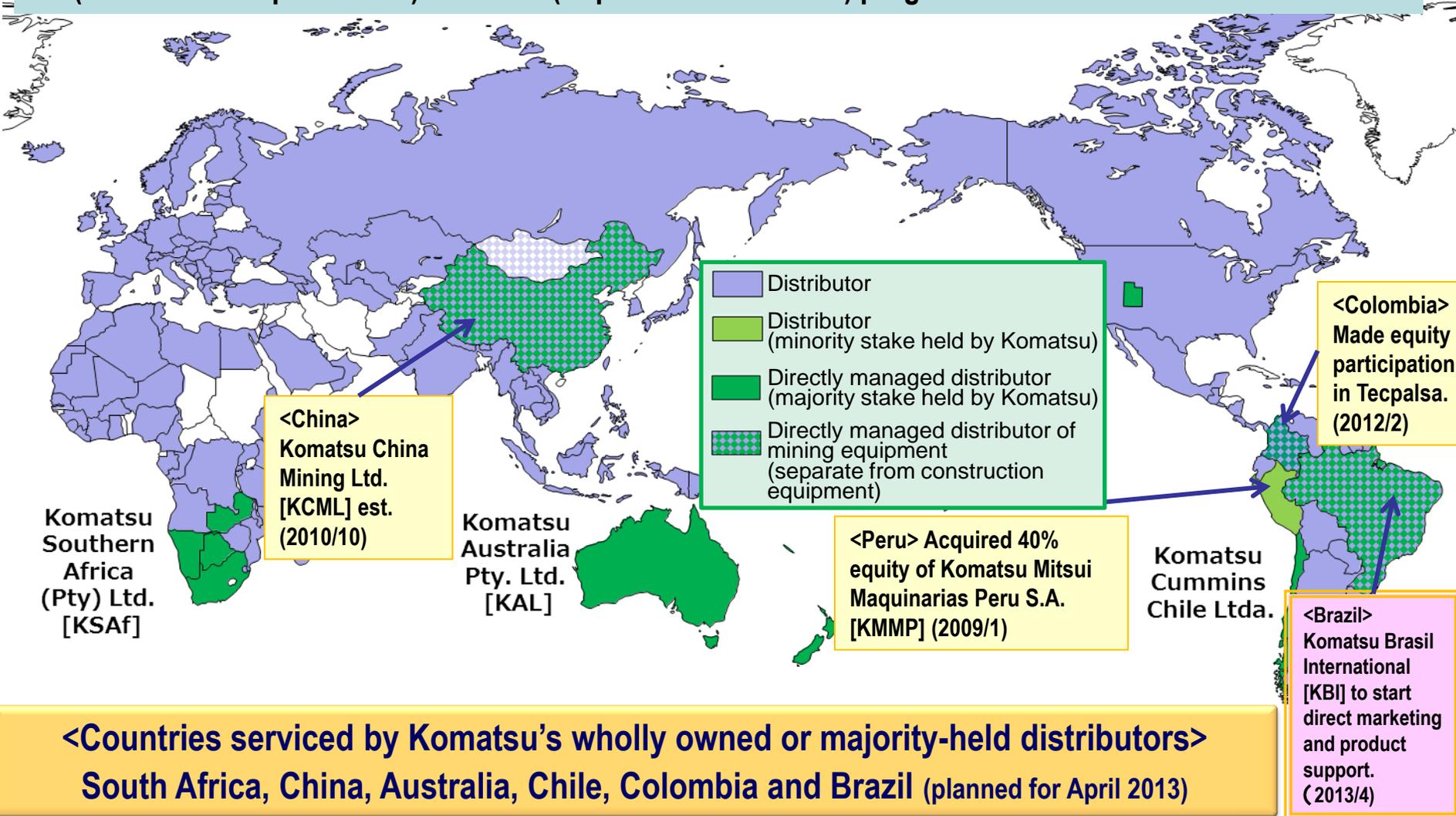


# Building Up Operations in Mining Markets

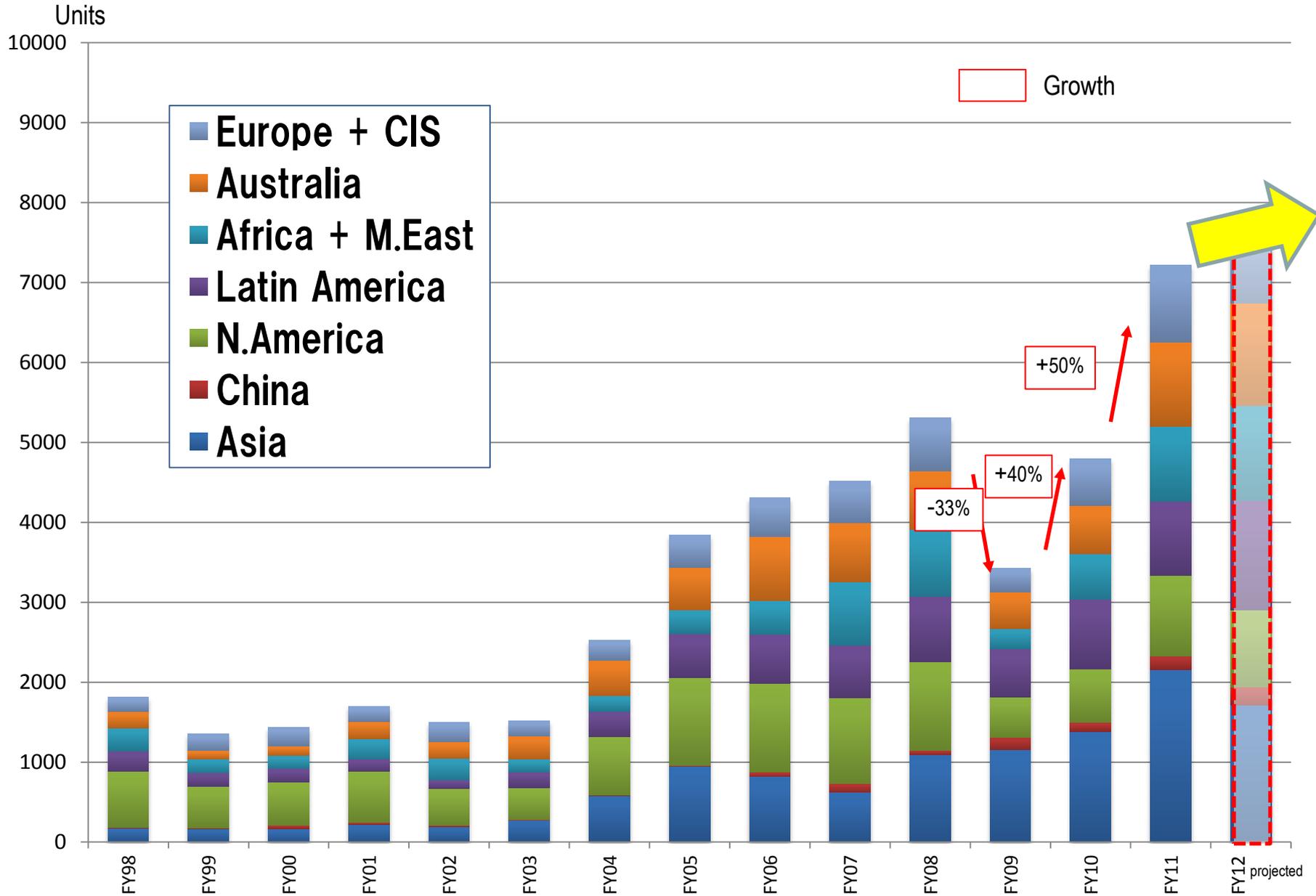
Basic policies for distributors of mining equipment:

Face-to-face operation by Komatsu (preferably, consolidated distribution subsidiary)

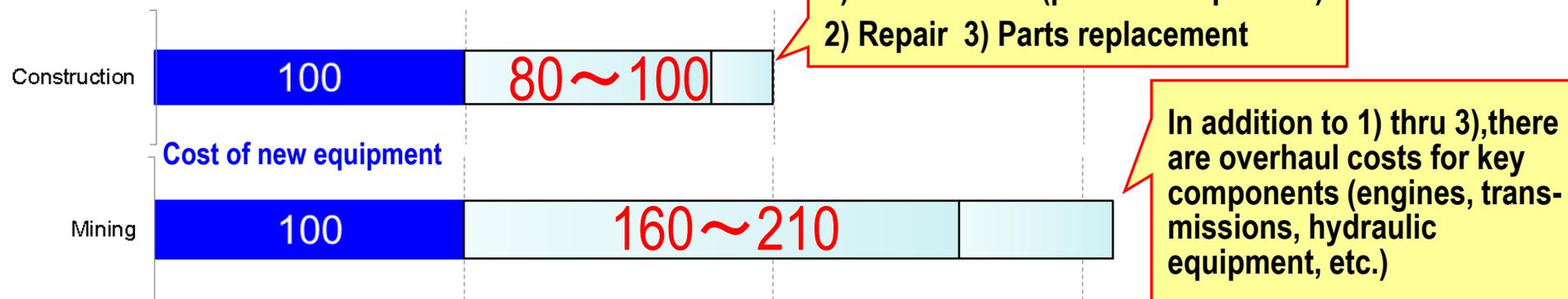
As Komatsu is responsible for functional parts and Reman operation, Komatsu and distributors team up and engage in customer-specific activities mainly through JoifUL (Joint Follow-up Log), CI (Continuous Improvement) and R&M (Repair & Maintenance) programs.



# Demand for Mining Equipment



## Product lifecycle costs



**Parts business will growth stably, supported by an increase in machine population in Strategic Markets and of mining equipment.**

### Reinforcing human resource development in Strategic Markets

- **Training through academia-industry collaboration**  
China: Shandong Jiaotong Univ. (2004 --)  
Russia: Yaroslavl Institute of Technology ( Sep. 2010 --) and Pacific National Univ. (Oct. 2011 --)
- **“Visualization” of technical levels and training records**

### Training service engineers of mining equipment

- Training distributors' service engineers
- Increasing the number of training programs for foreign participants at Techno Training Center (Komatsu City, Japan)
- Training service engineers at Komatsu HRDC (Philippines) and training distributors' engineers by Komatsu HRDC (Philippines) graduate
- Acquiring the Mining Equipment Division of a distributor in Brazil (to be completed in April 2013)



Promoting “visualization” of total supply chain

- Retail information
- Inventory of equipment



Established the Global HANSEI Operation Center on the premise of the Osaka Plant



Distribution bases in Panama and Dubai began operations in April 2010 and October 2012, respectively.

⇒ **Speeding up deliveries to customers and reducing distributors' inventories.**

