

Japan's Economic Recovery after the Tohoku Disasters

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Disaster Comparisons

	Kanto	Kobe	Tohoku
Date	!!Sept 1923	Jan 1995	Mar 2011
Magnitude	7.8	7.2	9.0
Deaths	142,000	6,055	20,000
Damage, % of GDP	37	2	4

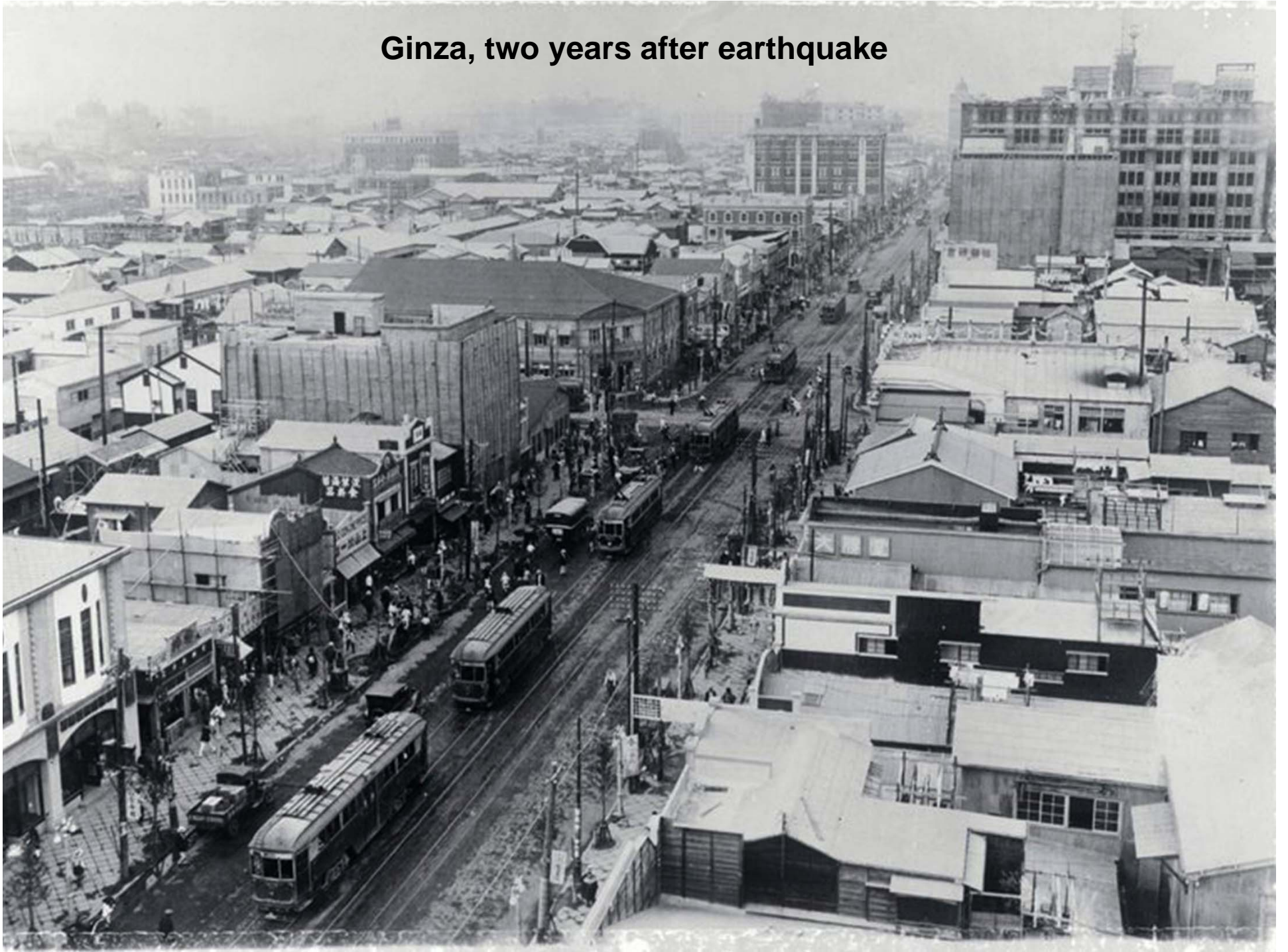
It's Good to be Big and Rich

- **Japan is big: geographically, economically**
 - **Destruction in only a small part of country**
- **Japan is rich**
 - **Has the resources to cope**
- **Japan is competent**
 - **Public and private institutions, individuals**
- **Japan has redundancies, resilience, robustness**

Ginza, Kanto Earthquake, Sept 1923



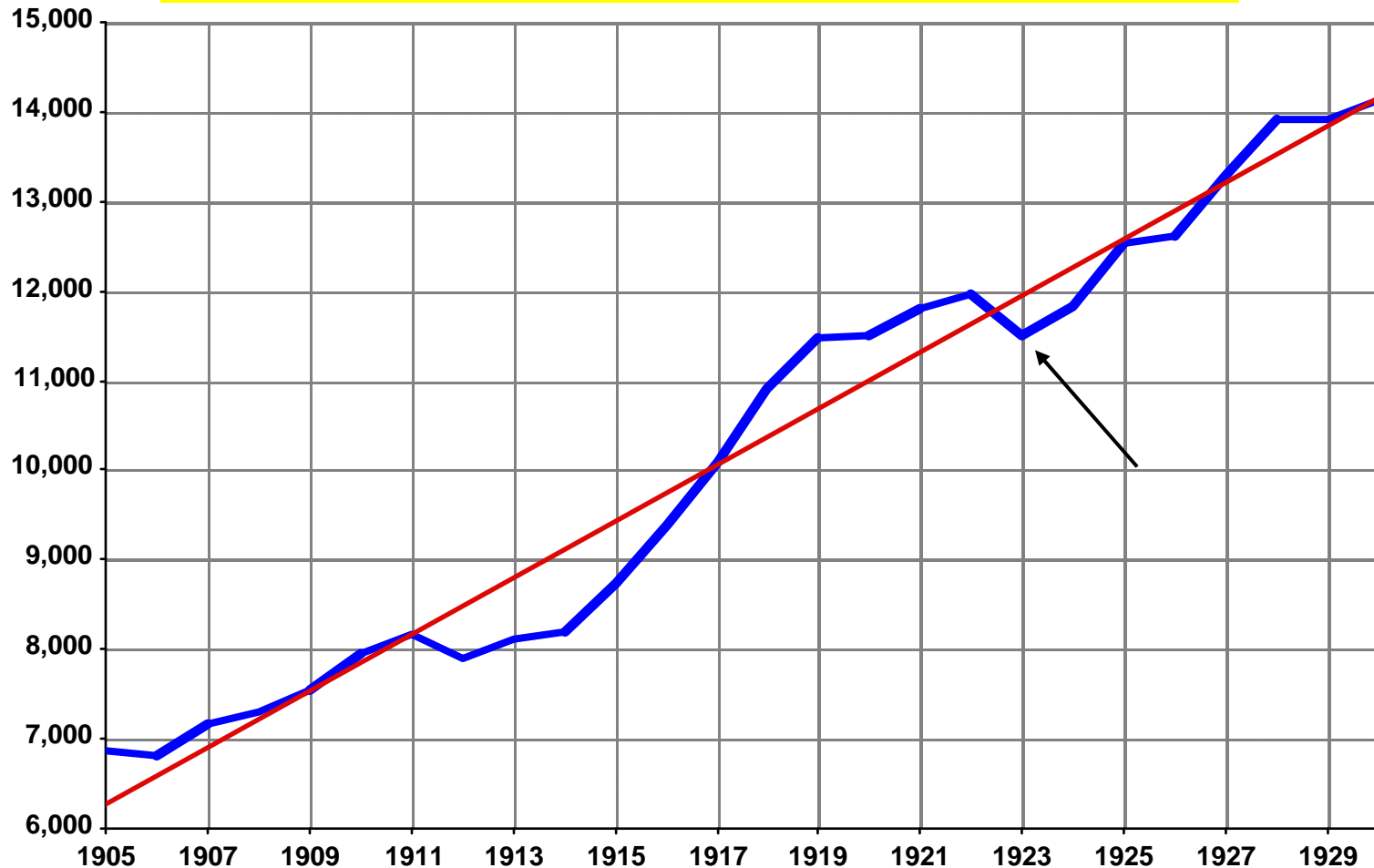
Ginza, two years after earthquake



GDP (annual)

Kanto Earthquake

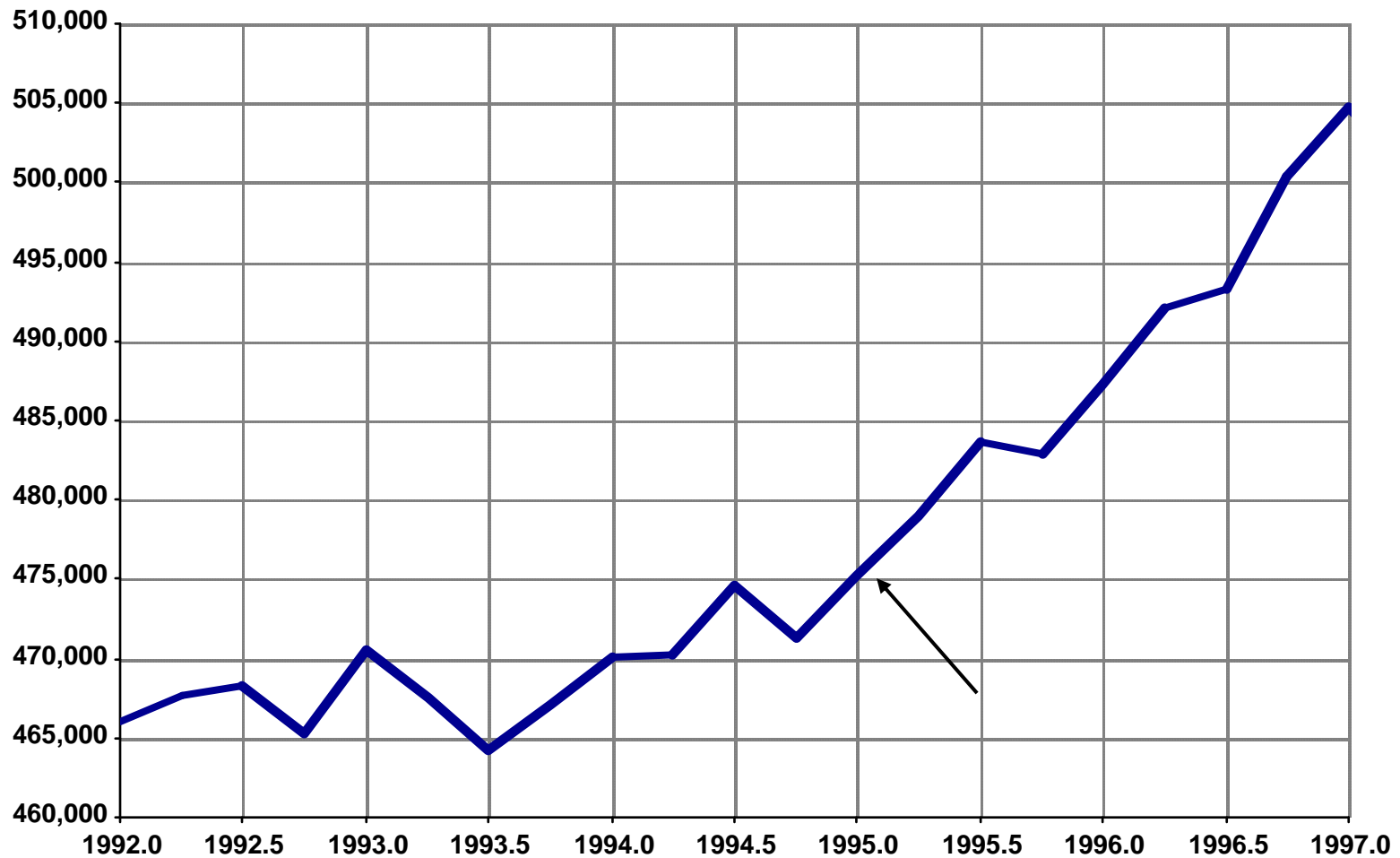
Spot the quake, Sept. 1, 1923?



Source: Historical Statistics of Japan;
million 1934-46 yen

Real GDP (quarterly)

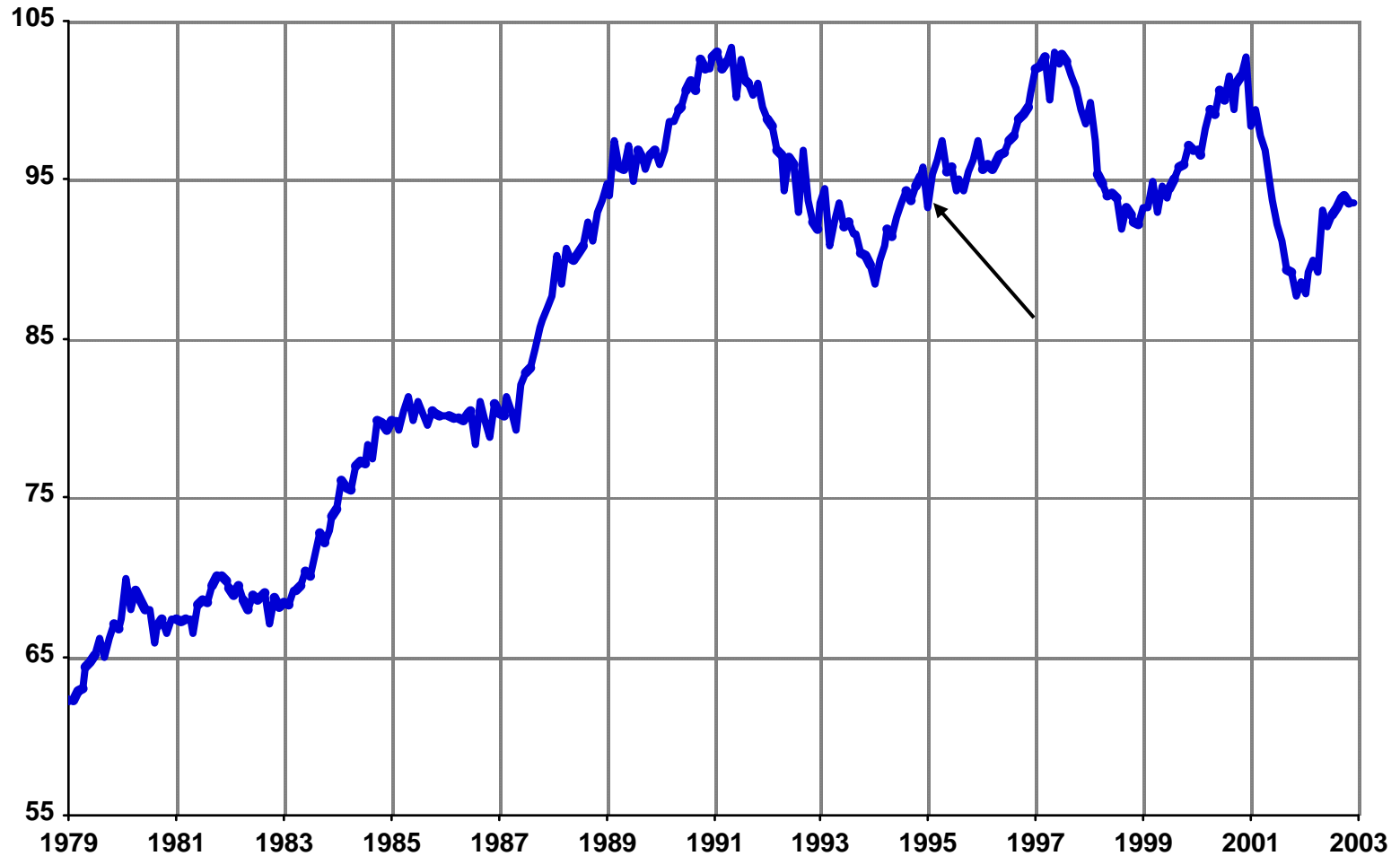
Spot the Quake, Jan 16, 1995?



Source: Economic and Social Research Institute, Cabinet Office (quarterly data, billion ¥)

Industrial Production (monthly)

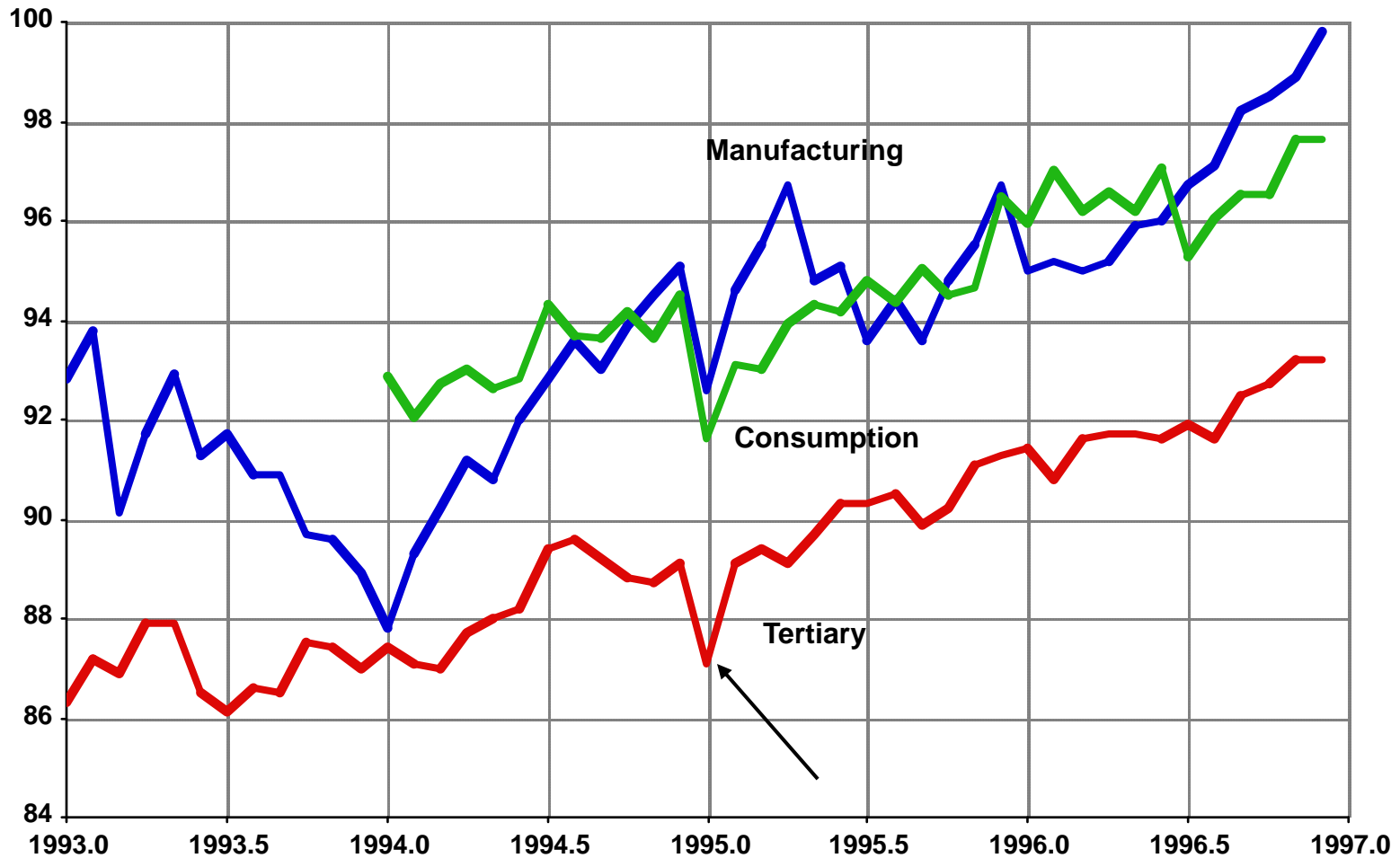
Spot the Quake, Jan 16, 1995?



Source: Ministry of Economy, Trade and Industry monthly data, (index, 2000=100)

Spot the Quake?

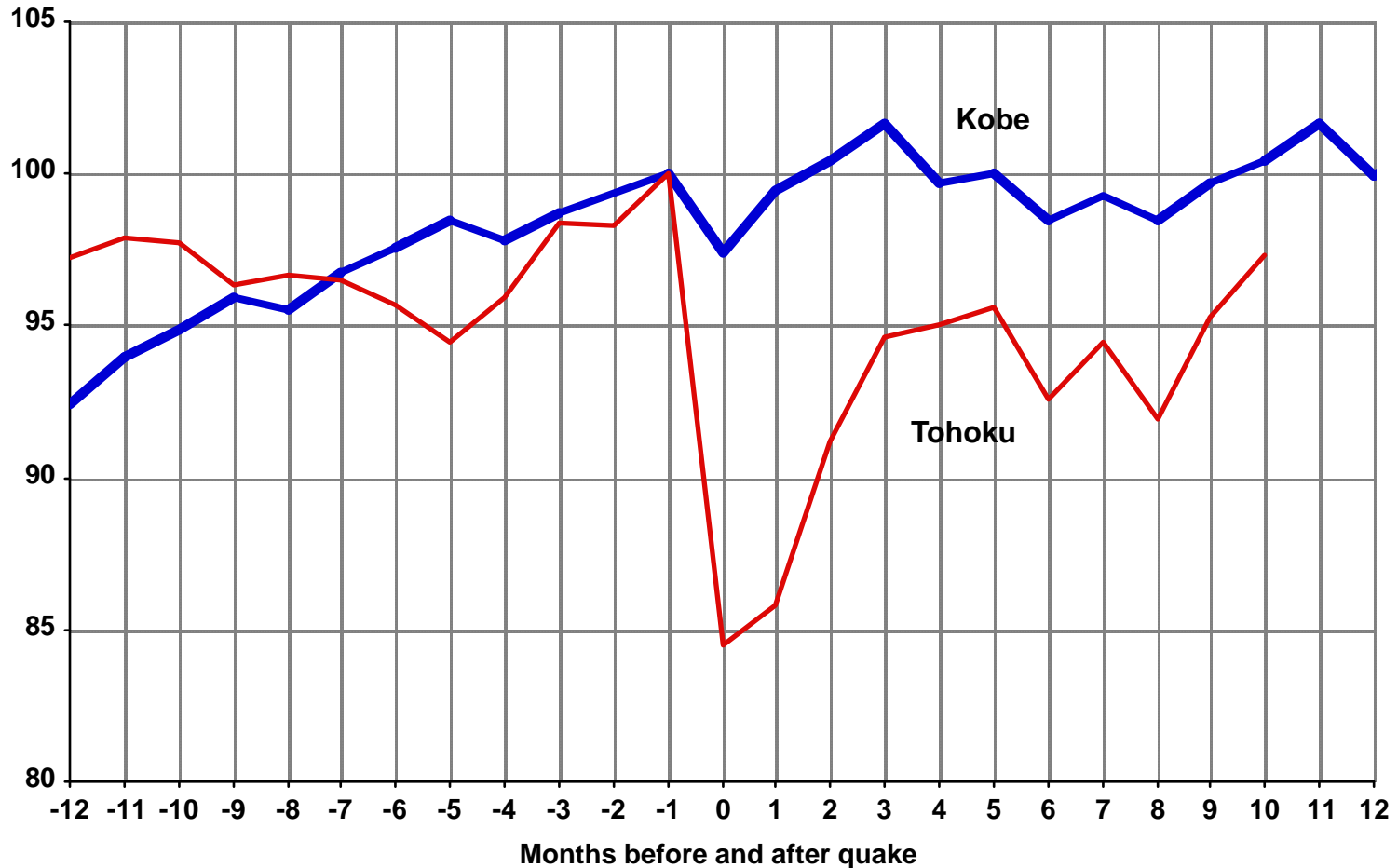
There it is, Jan 1995 (monthly data)



Source: Ministry of Economy, Trade and Industry monthly data, (index, 2000=100)

Industrial Production Comparisons

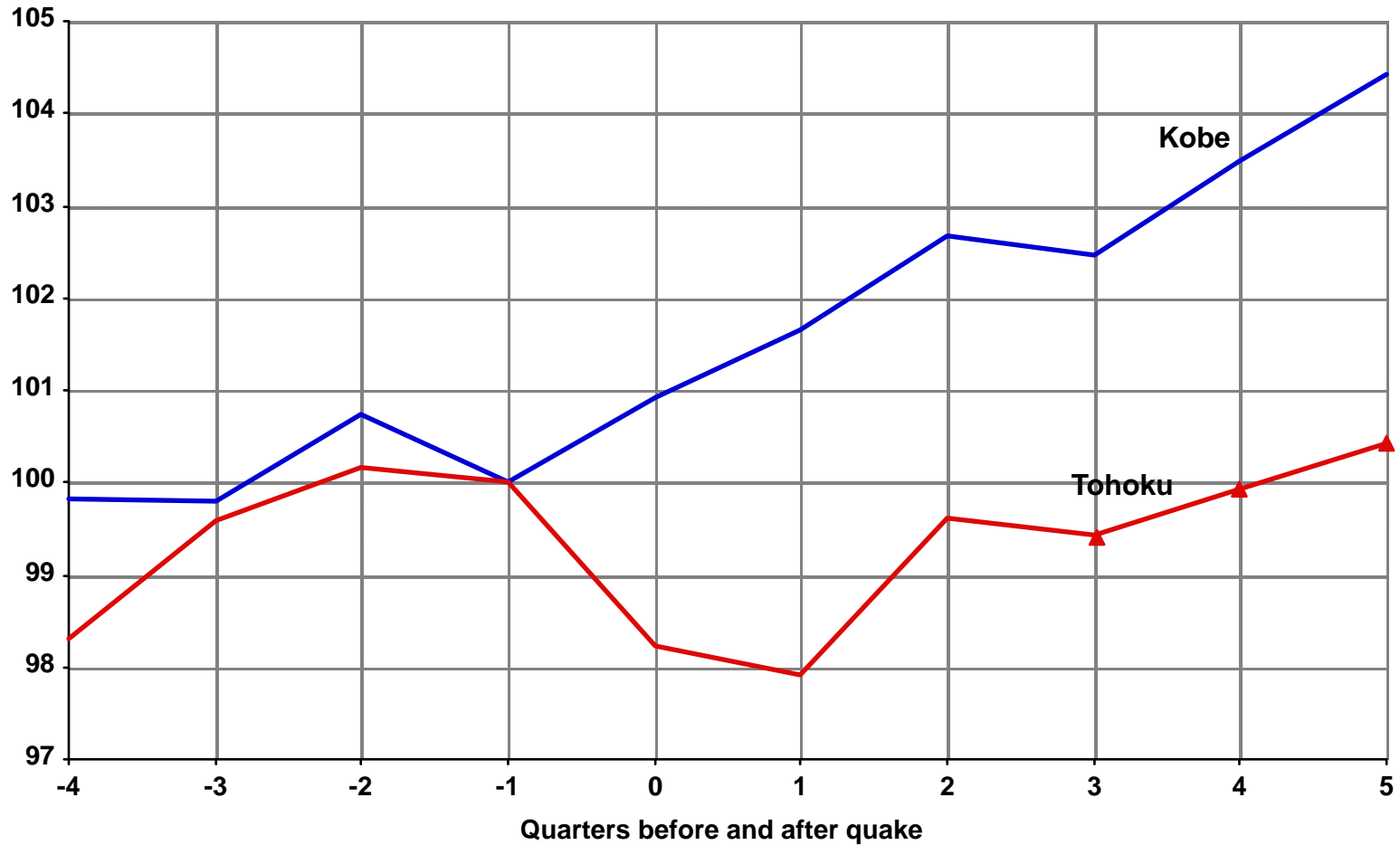
Kobe: Jan 1995; Tohoku: Mar 2011



Source: METI; Output indexed to one month before quake = 100

GDP Comparisons

Kobe: 1st qtr 1995; Tohoku: 1st qtr 2011



Output indexed to one quarter before quake = 100

Quarterly growth from 1Q2012 projected at 2% annual rates

Events Affecting Economy

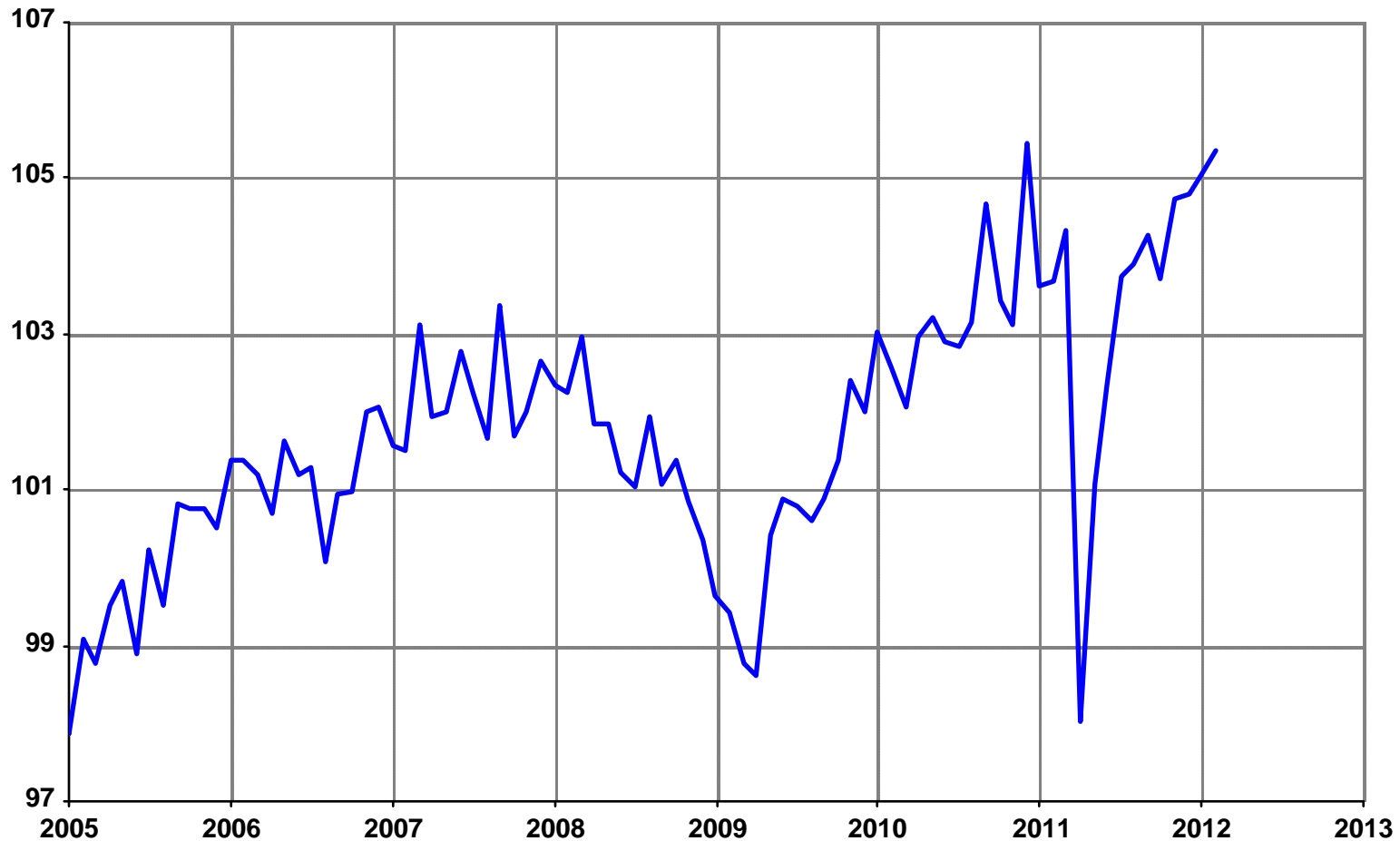
- **Electricity capacity fell 30% from nuclear closures**
 - However, electric companies revived old plants
 - Added new capacity (fossil fuel plants)
 - Conservation reducing demand 15-20%
- **Undiversified suppliers in second, third tier producers**
 - Alternative suppliers used same inputs
- **Autos dependent on non-standardized electronics, software**
 - High-end vehicles contain over 100 microprocessors
 - Key electronics producers damaged by quake
 - Difficult to qualify alternative suppliers
- **Strong incentives to rebuild Kanto, Kobe; weaker for Tohoku**

Can Government Afford Reconstruction?

- Reconstruction budgeted at ¥21 trillion:
4.5% of GDP; 3.4% of outstanding JGBs
- Only part will be financed by borrowing
- Privately held JGBs 60% of GDP, not 220%
- No problem selling debt

Looking Forward: Consumption

Recovers to post-recession, post-quake high



Source: Cabinet Office consumption proxy, 2005=100

Real GDP Growth (%)

	2009	2010
Actual	4.4	-0.7
	<u>Forecast</u>	
	2012	2013
J.P. Morgan	1.5	1.3
IMF	1.7	1.6
World Bank	1.9	1.6
Bank of Japan	1.8-2.2	1.4-1.8
OECD	2.0	1.6
Alexander	2.1	1.9