

IOCs: Investment and Industry Structure

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National Oil Company Study

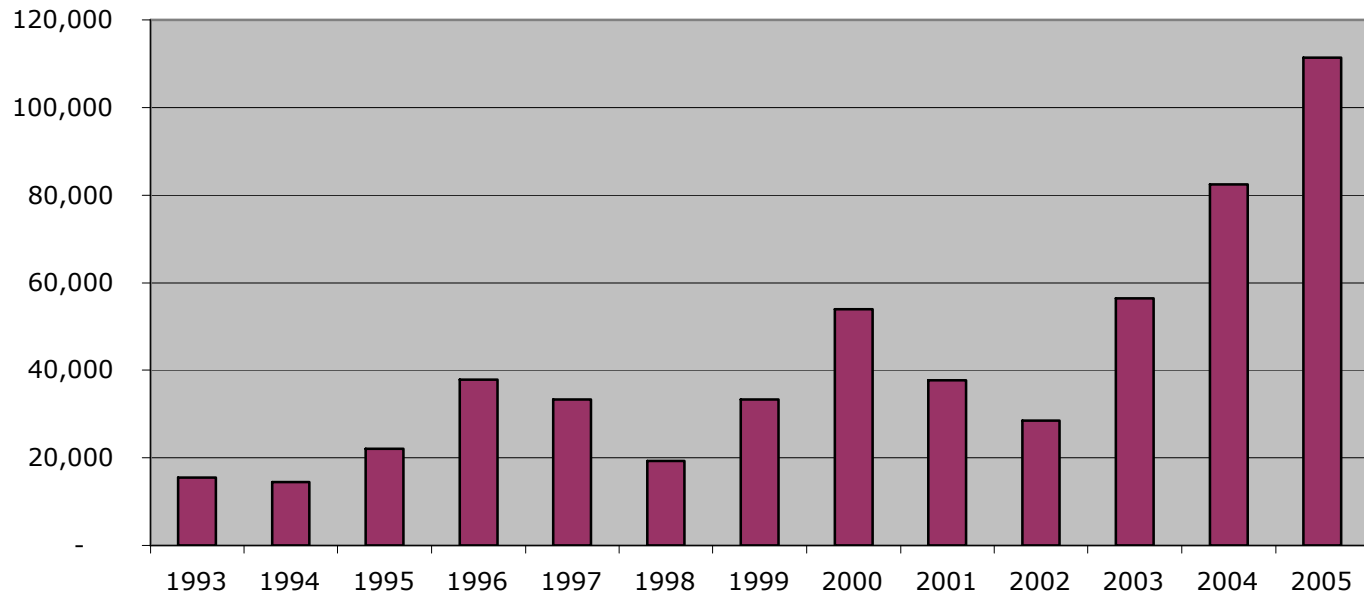
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Scope of Study

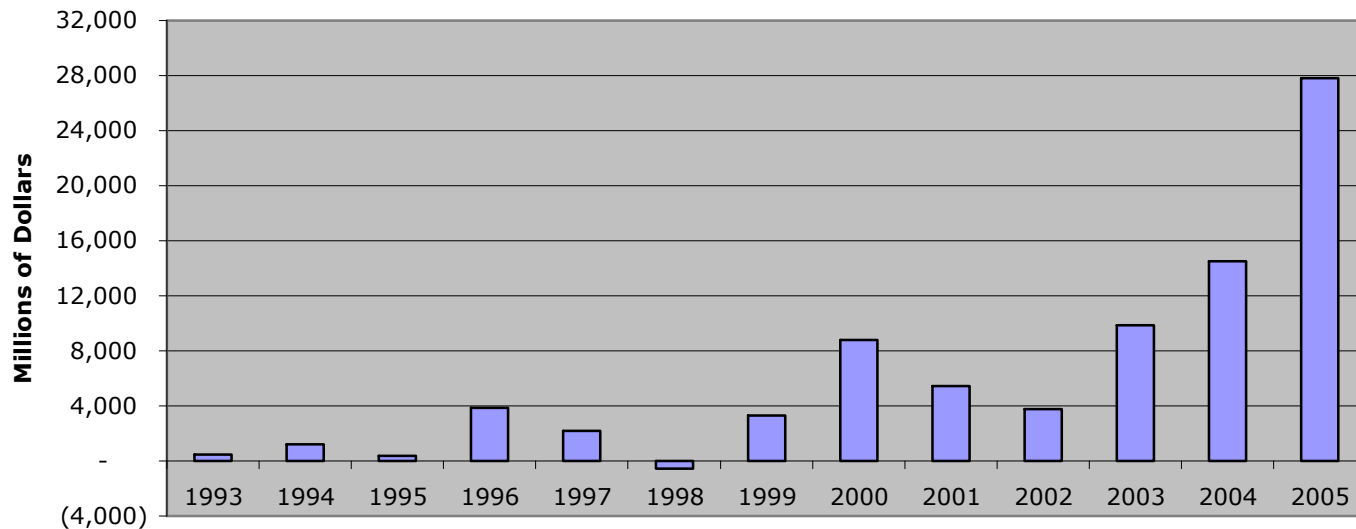
- Focus on Big 5 (Exxon-Mobil, Chevron, BP, Shell and Conoco-Phillips – and 20 US based next largest firms
- Data from SEC filings

	Profits (\$Millions)	Reserves (MMBBls)	Production (MMBBls/Year)
Big Five	111,410	34	3,450
Next 20	27,822	8	772

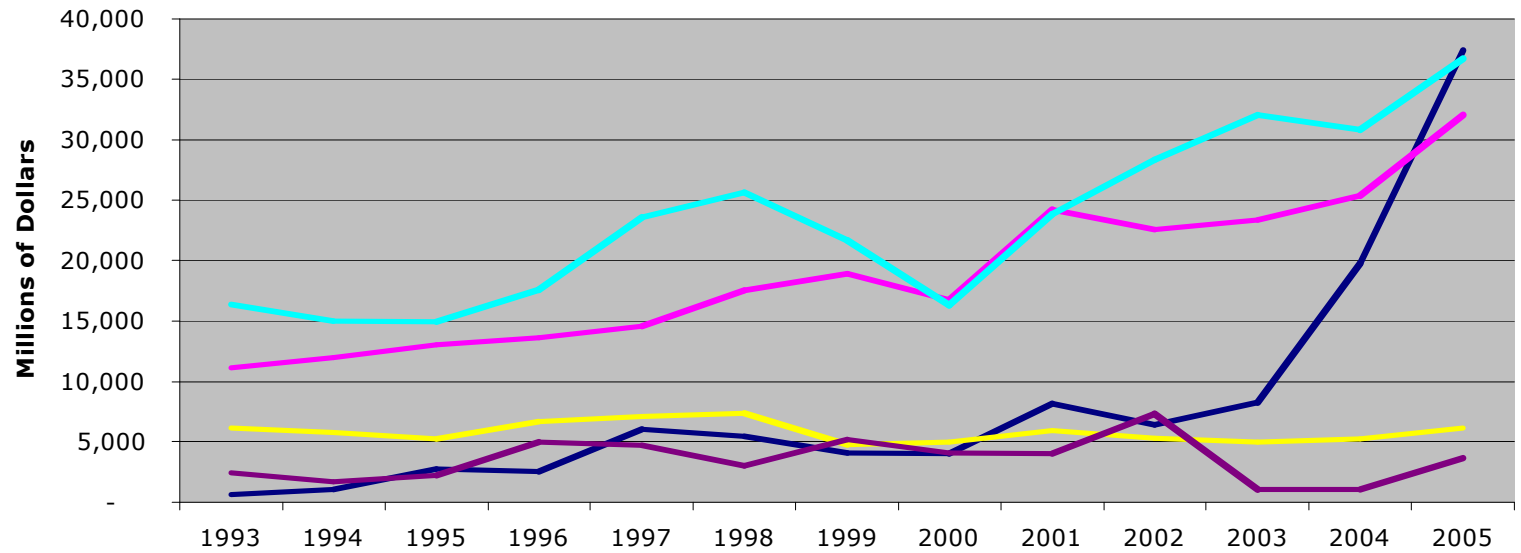
Net Income (Big 5)



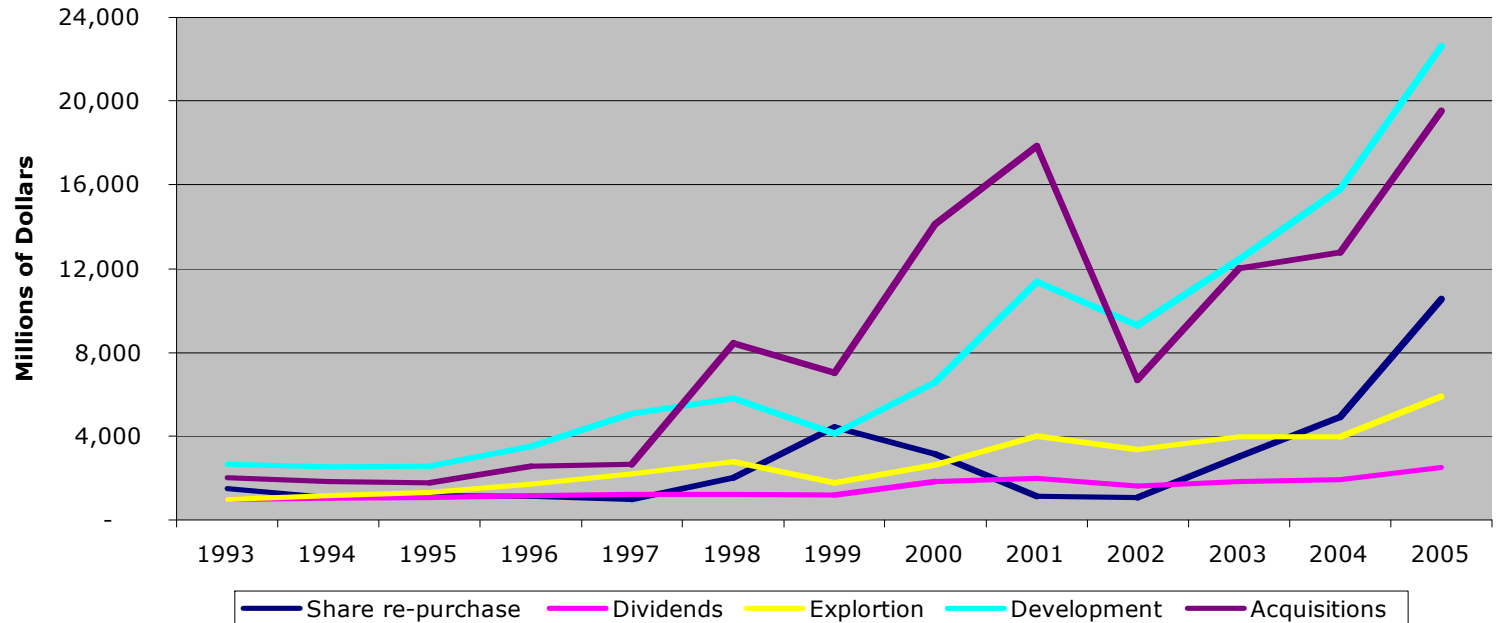
Net Income (Next 20)



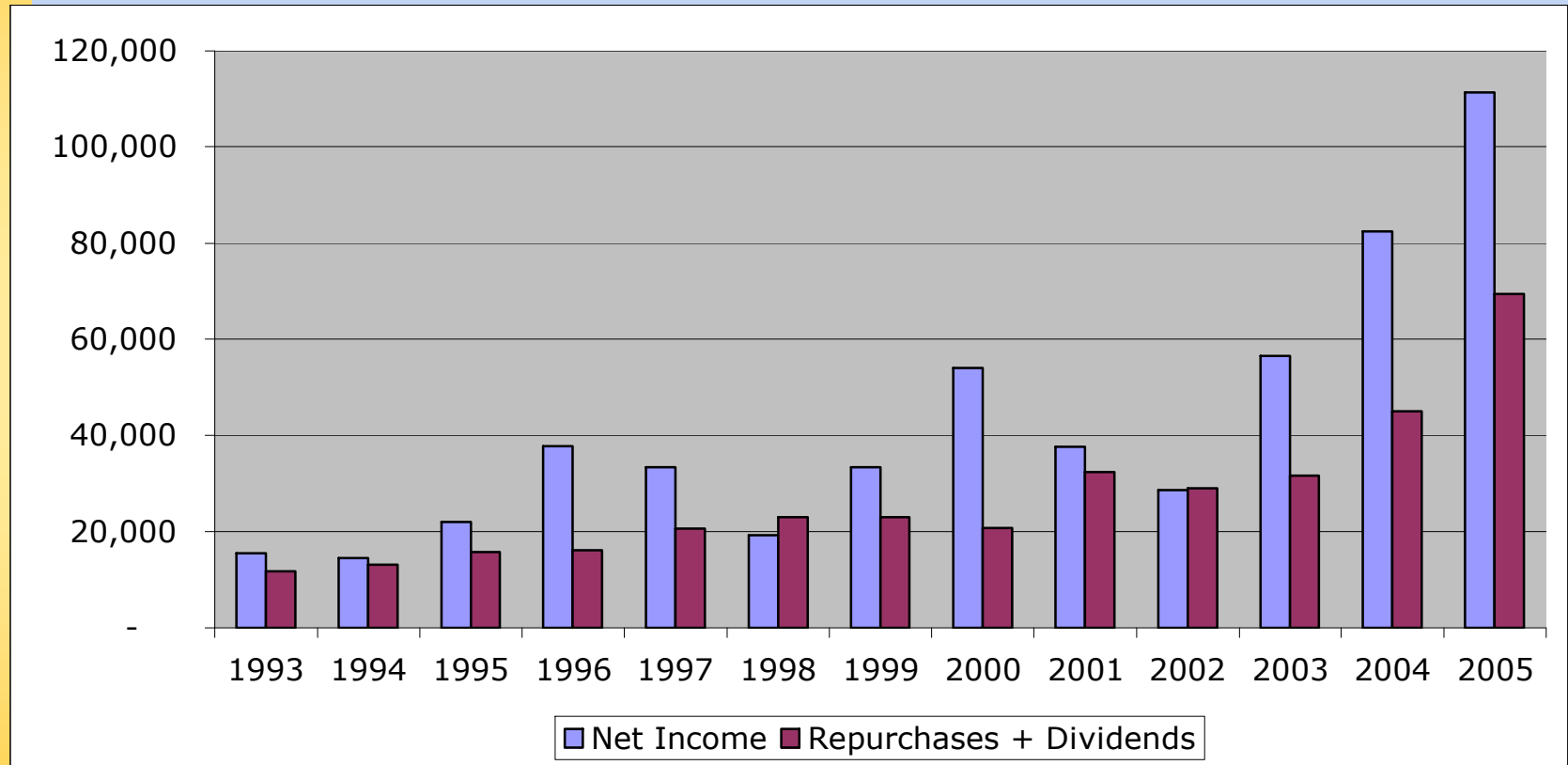
Selected Outlays (Big 5)



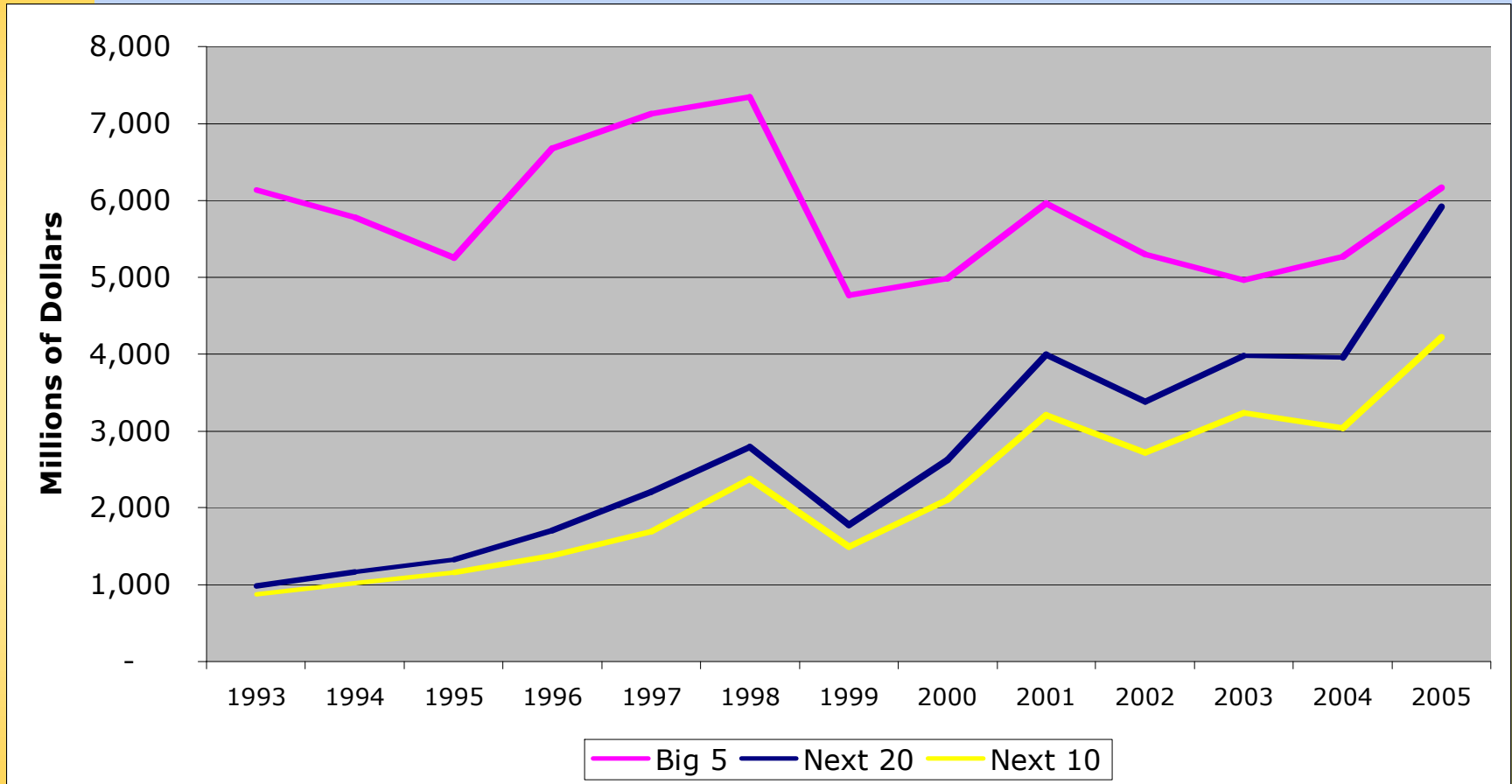
Selected Outlays (Next 20)



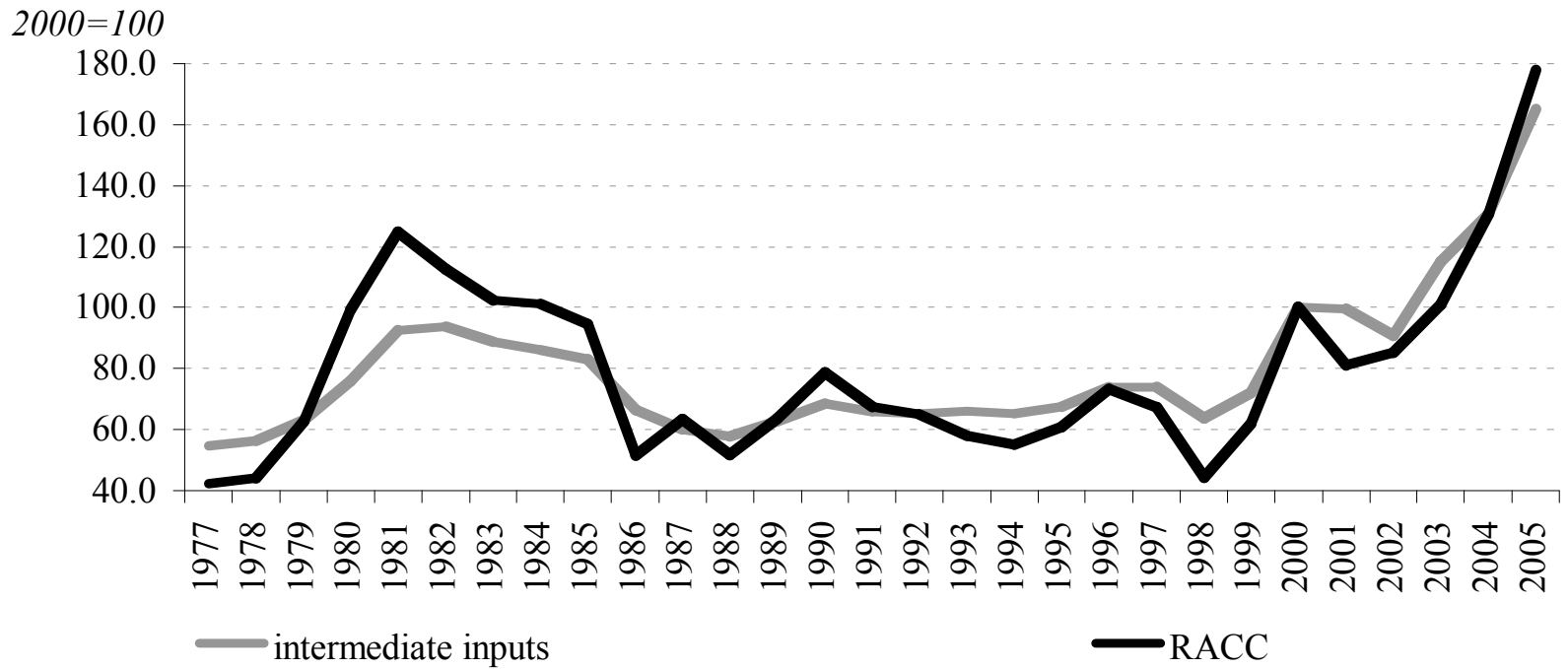
Buybacks and Dividends (Big 5)



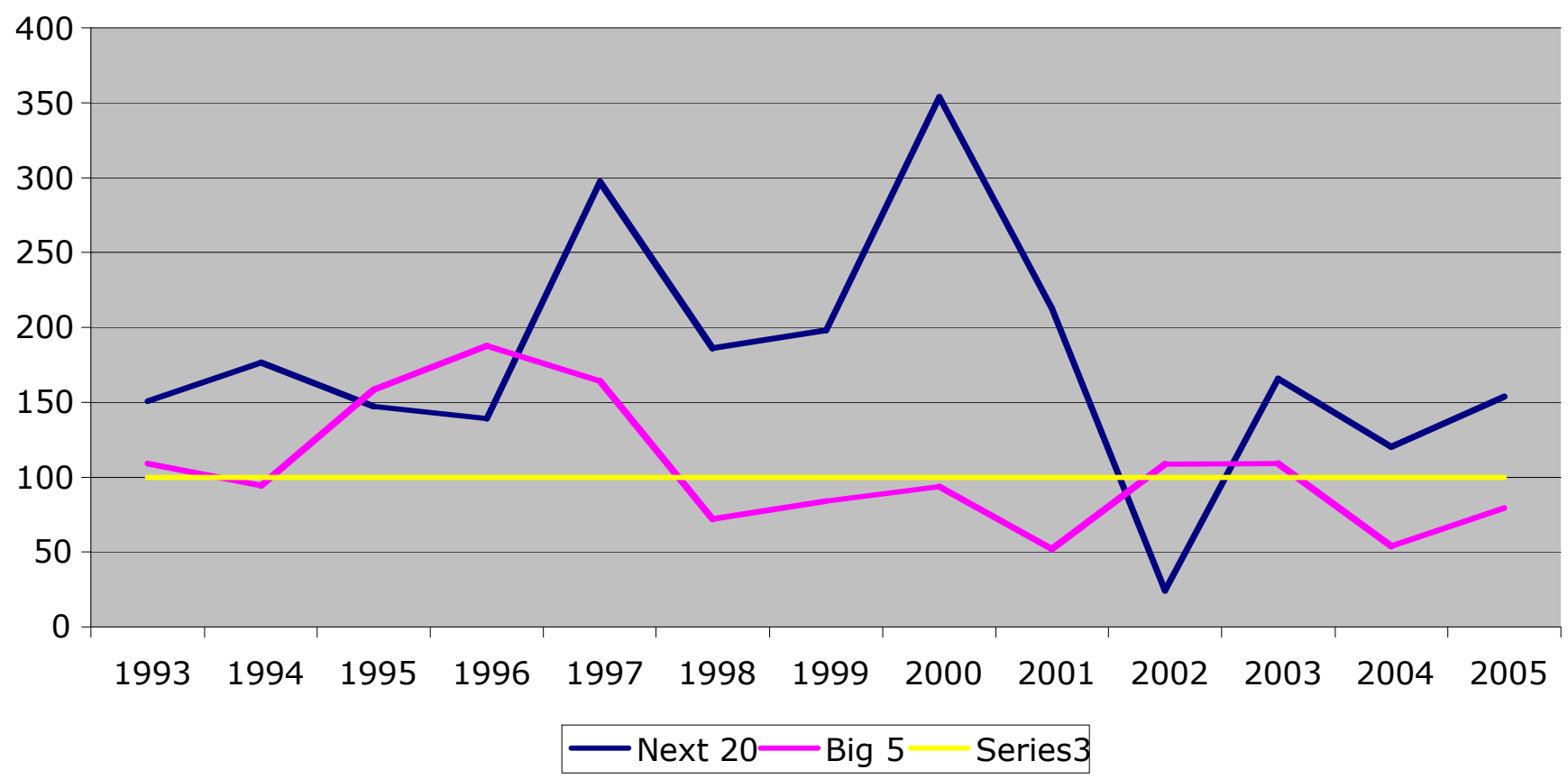
Exploration Outlays



Oil and Gas Extraction Price Indices
1977-2005



Reserves Replacement Ra



Explanations for Low Investment

- No good prospects
 - Restricted access to acreage.
 - Large firms have comparative advantage in developing large fields.

- Price volatility - conservative investment policy
 - Pattern of extended periods of excess capacity and capacity shortages.
 - Breeds uncertainty about future price (low planning price for investment decisions)

- Shortages of professional and skilled manpower and equipment. Result of previous reductions in investment levels
 - ◆ Layoffs of geologists (students chose other careers)
 - ◆ Contraction of sub-contractors
 - ◆ Long lead-time to reverse these
 - ◆ Results in high costs

Explanations for Low Investment (cont'd)

- Pressures from financial markets
 - ☞ Focus on market return reflects concern over value of stock options and takeovers

- Mergers have reduced the number of large firms.
 - ◆ Large IOCs account for most of capex. The large number of smaller firms are not a threat to IOCs.
 - ◆ Increasing concentration permits a longer response time.
 - ☞ In 1990, 5 largest firms controlled 69% of reserves held by “top 25” and produced 45% of output.
 - ☞ In 2005 5 largest controlled 82% of reserves and 88% of output of “top 25”.

Future of IOCs: Two Views

- IOCs will have a diminished role in future
 - ◆ IOC expertise lies in managing large projects
 - ◆ Most remaining large projects within the domain of NOCs. (NOCs may partner with IOCs that have specific (deep water?) technology or gain access to markets. Smaller firms will play increasing role as average size of fields declines.
- IOCs act more like service subcontractors to NOCs
- Mergers are defensive in mature industry. Further consolidation likely if IOCs continue to shrink?
 - ◆ Mergers often associated with firms in a declining industry. (Profits boosted through cost cutting rather than expansion)
- IOCs will not successfully diversify into new energy substitutes?
 - ◆ Business history suggests that firms in a “maturing” industry do not easily adapt to new substitutes

On the other hand...

- IOC behavior rational response to low prices in late 1990s.(Shift in strategy from growth to efficiency through consolidation)
- Subsequent price increase not anticipated.
 - ◆ Conservative planning prices were *ex post* too low
- Capacity constraints in subcontractor industry (and resulting high prices for those services)
- If prices fall (and/or governments drain excessive revenues from NOCs) NOCs may welcome IOC partnerships that can bring in needed capital.
- Emerging market risk premiums could rise
- Continued role for IOCs in cases where technology and scale are important (deepwater, unconventional oil). IOCs can compete with NOCs in third countries.

Some Policy Implications

- Is there a national interest in maintaining IOCs?
 - ◆ Nice to have resource rents accrue to US shareholders rather than foreigners (but global capital markets limit that)
 - ◆ Promotes ‘public diplomacy’ (true for all US Multinationals)
 - ◆ IOCs are thought to be more aggressive about expanding capacity and output than NOCs (for various reasons). That might be in the (short term) US interest. (But some NOCs also aggressive).
 - ◆ Otherwise - not in a global energy market with many suppliers.

- Should governments care about the size of IOCs?
 - Not in a global market (in upstream)

- Should US have an NOC?