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FINANCE AND DIFFERENTIAL ACCUMULATION IN THE GLOBAL PHARMACEUTICAL INDUSTRY

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The Nature of Capital in the Knowledge-Based Economy

Finance and
Differential Accumulation in the
Global Pharmaceutical Industry

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The Nature of Capital in the Knowledge-Based Economy

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OUTLINE

- Usual Interpretations of Recent Economic Transformations
 - New Economy Thesis
 - Financialization Thesis
- The Productivity Bias; The Need of a Power Theory of Value
 - What is being accumulated?
 - Differential Accumulation
- An Illustration with Pharmaceuticals
 - New hypothesis

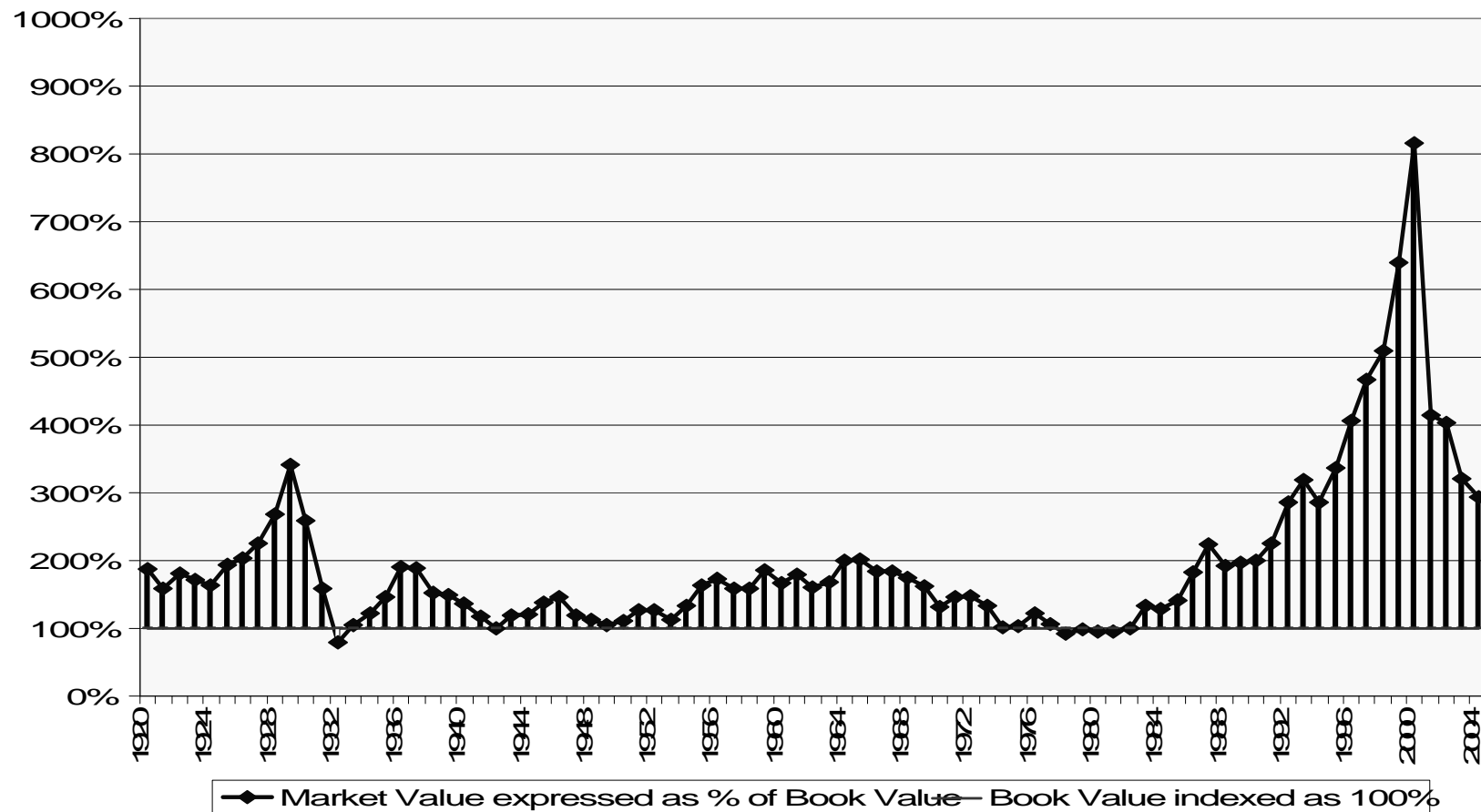
Structural Transformations in Advanced Capitalism: Knowledge or Finance?

- 1- «New Economy Thesis» (Cognitive Capitalism): Transformations are due to new intangible sources of production and wealth, chiefly knowledge and intelligence. Accumulation regime based on creativity and permanent innovation. (*Rifkin, Castells, Matisse-Issys, Negri, Sveiby, Lev*)
- 2- Financialization or «Shareholder Capitalism Thesis»: the rise of institutional investors created a new regime of growth where firms restructure the division of labour under new models of corporate governance to maximize shareholder value. Finance capital captures the real economy and operates a major income redistribution towards investors. (*Aglietta, Plihon, Krippner, Henwood, Chesnais, Stanford*)

The New Economy Thesis: Intangible Assets as % of Tangible Assets

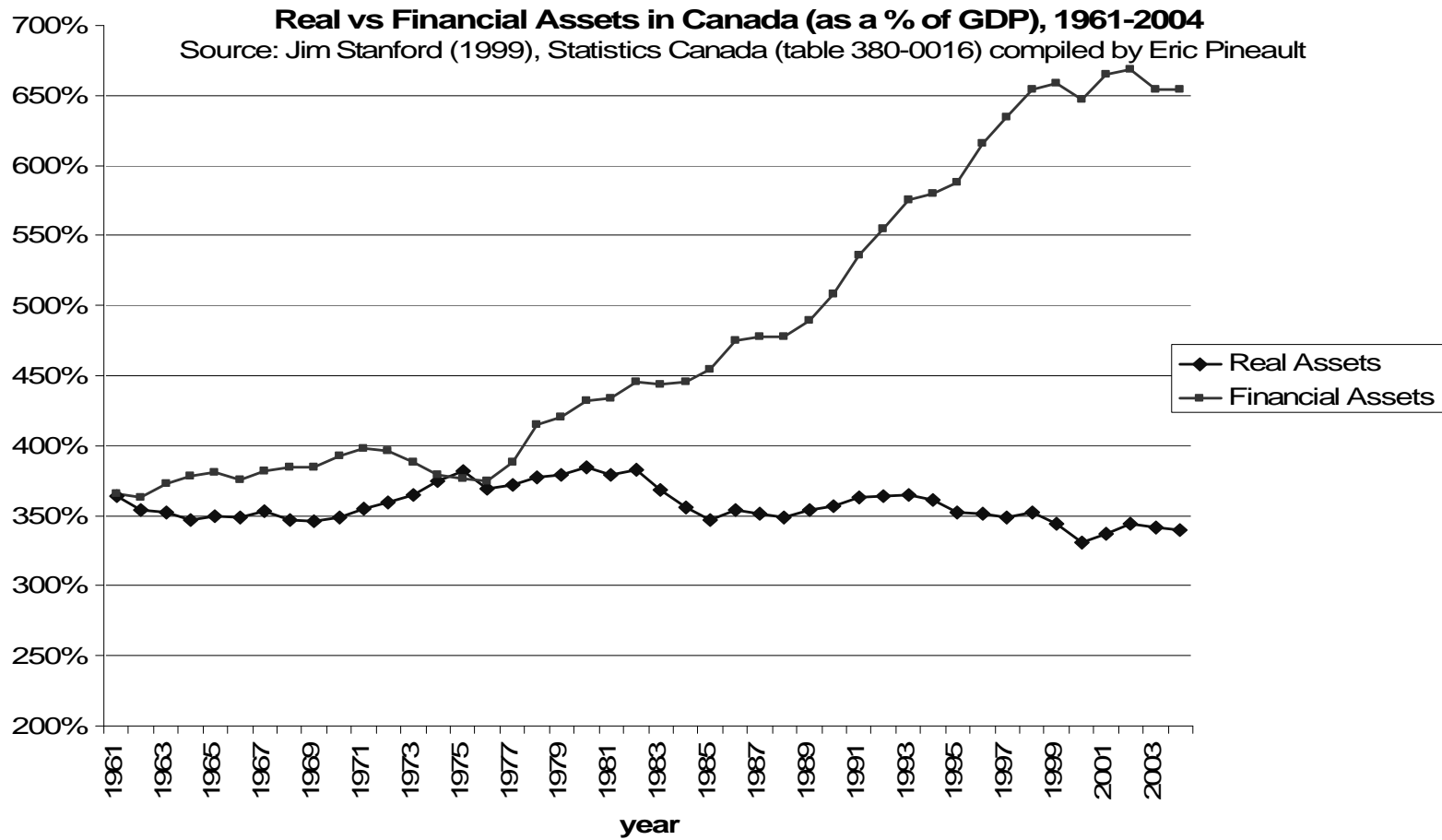
« Market-to-Book Value » for Dow Jones Industrial Average, 1920-2004

Source: Sveiby (1998), Data updated with Value Line



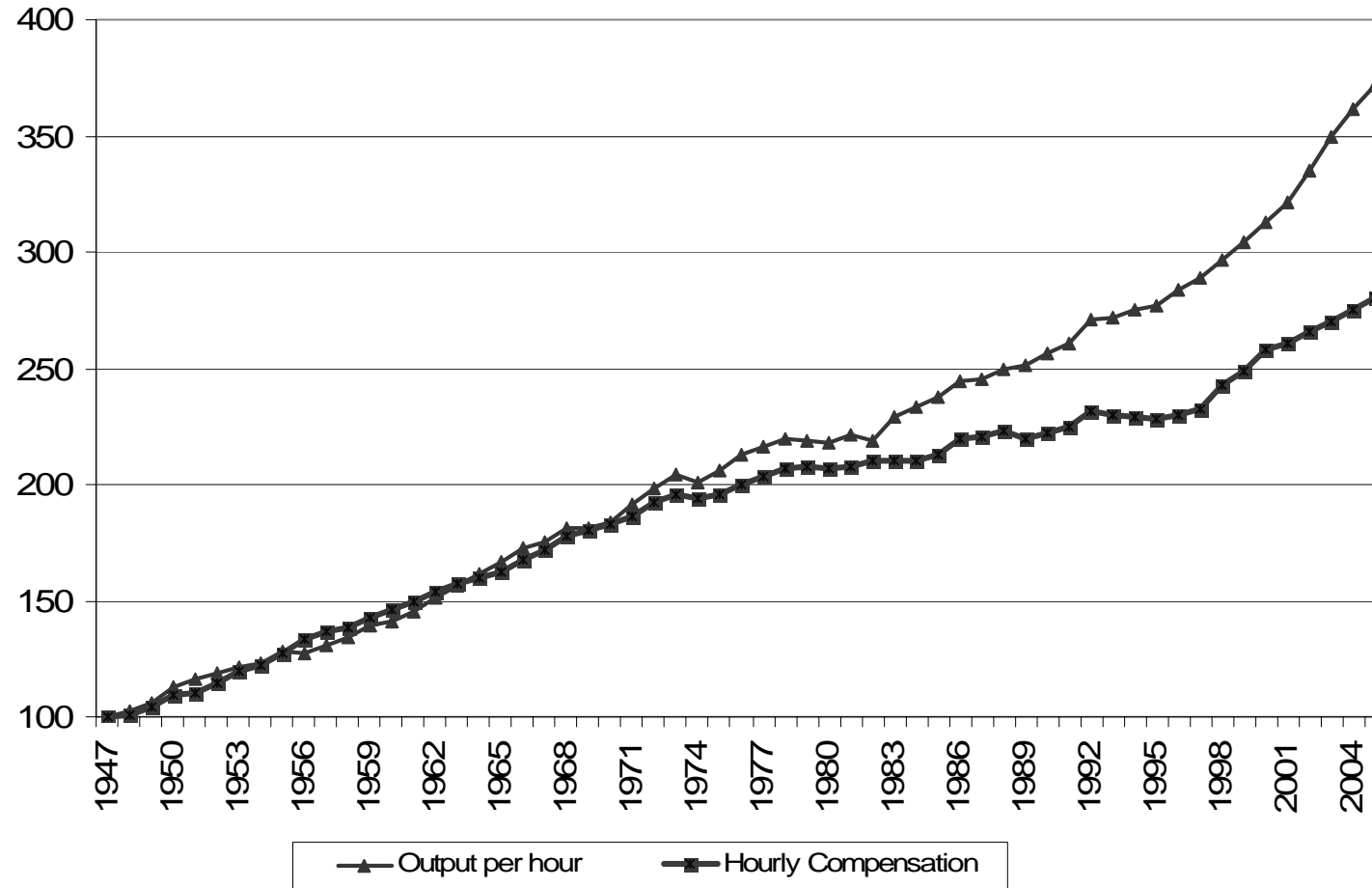
Financialization: Financial Capture of the Real Economy

"Jimbo Index"



Hourly Productivity and Hourly Real Compensation per Worker for US Non-Farm Business Sectors Between 1947-2005 (1947=100)

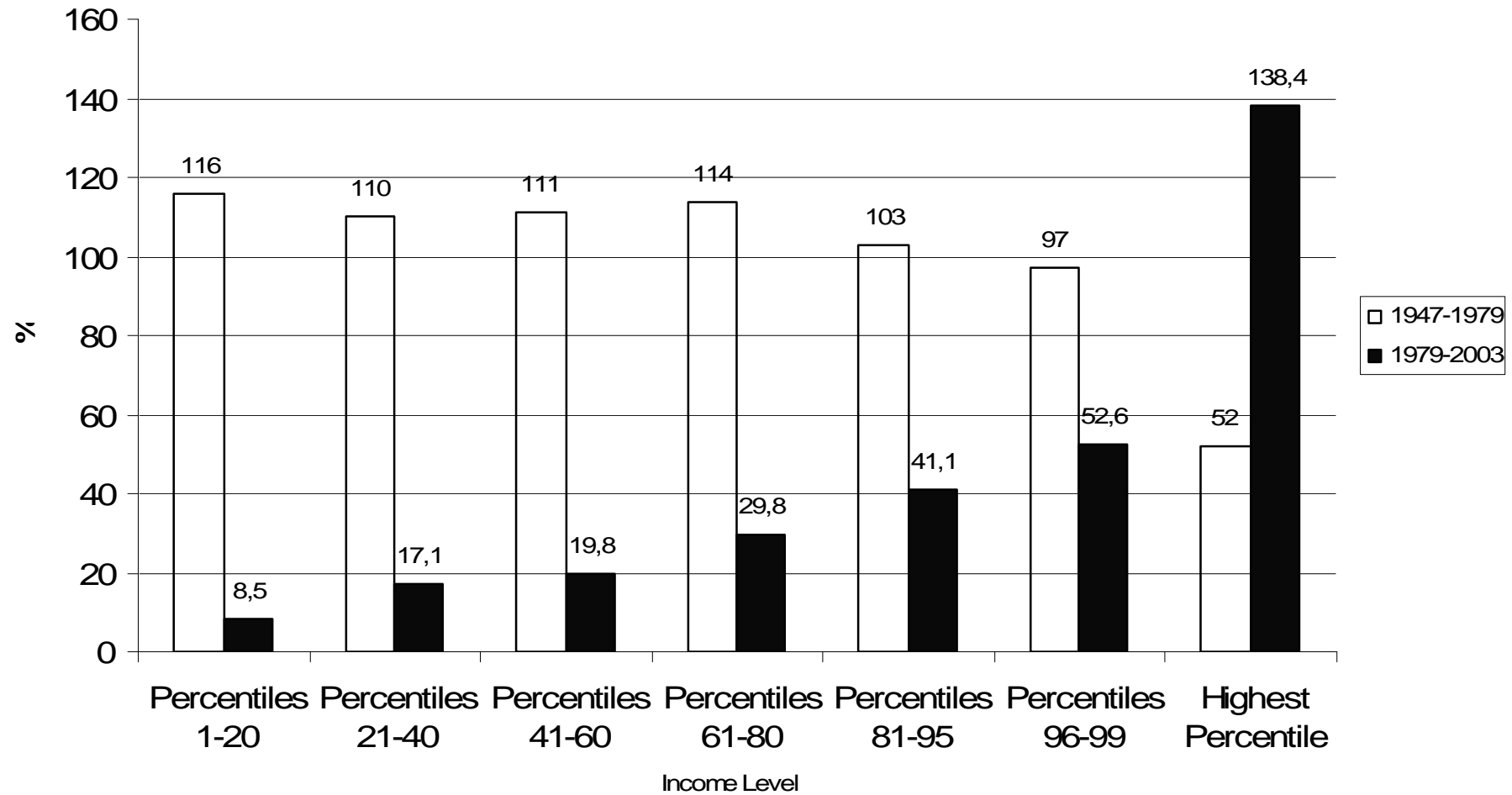
Source: Bureau of Labor Statistics



The Elite takes all

Growth in After Tax Real Income for US Households According to their Income Level (1947-1979 & 1979-2003)

Source: Congressional Budget Office, Effective Tax Rates (Various years)



Problem for both interpretations: Productivity Bias

- Conceit that there is a « real » economy, producing real wealth to which correspond economic values.
- Capital accumulation remains an accumulation of wealth, of useful commodities produced in the past.

Thorstein Veblen's alternative: dichotomy between Business and Industry *(Theory of Business Enterprise; Absentee Ownership)*

- The industry (shared technology by the community) that produces wealth is inherently a societal process where every product embody the entire history of human knowledge.
- Business (and economics) is about the creation of pecuniary value and the capture of earnings.
- Capital is a claim over putative earning-capacity, a claim not on the usufruct of the past but on future earnings. Capital is only financial capital.
- The corporation is a better form of economic organization to maximize earnings, not by maximizing production but by maximizing the control over productive capacities.
- Tangible assets are capitalized in terms of Sabotage capacity; Businessmen thus take the industry hostage and can reclaim a ransom.
- The bulk of any corporation's capitalization is made of intangible assets, which are any durable earning-capacity (due to any institutional setting, like conventions or state power).

Shimson Bichler and Jonathan Nitzan's Differential Accumulation

- Capitalism has to be analyzed as a whole social order, in which accumulation is not an offshoot of production, but, rather, the manifestation of a struggle over the shaping of the social process between dominant groups and the rest of society, as well as between those groups themselves

-Capitalized Earning-Capacity represents a claim, not for a share of the output, but for a share of control over the social process. Capital is the commodification of capitalist power and thus capital accumulation is an accumulation of capitalist power

- Power needs to be measured in differential terms. In the capitalist logic, it is not about the search for maximum profit, it is the search to maximize profits compared to others, it is to beat the average.

- Capital Accumulation should thus be measured in differential terms (Differential accumulation) by comparing a group's (or corporation's) combined capitalization to that of an average unit of capital.

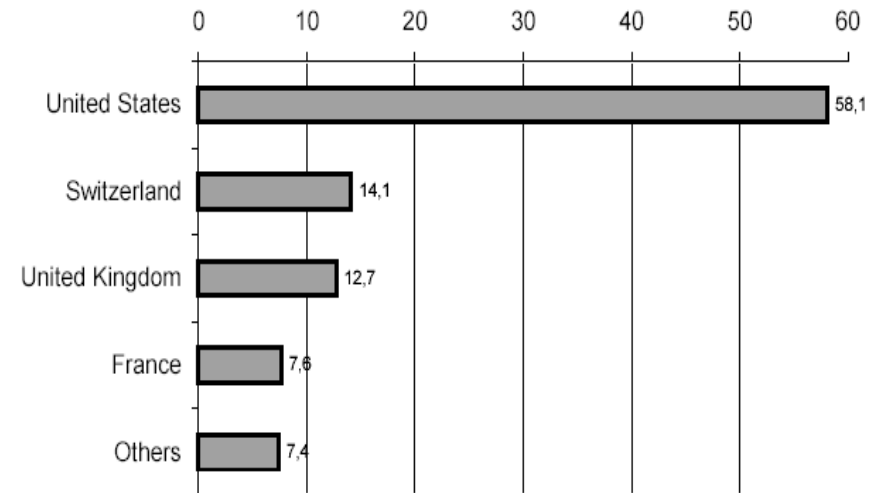
**Pharmaceutical Firms among the Global 500
biggest firms in terms of market value**

Source: Global 500, Financial Times May 2005

Global Rank	Pharmaceutical Firms	Country	Market Value (US \$M)
8	Johnson& Johnson	US	199,711
9	Pfizer	US	195,944
19	GlaxoSmithKline	UK	134,123
23	Novartis	Switzerland	124,61
26	Sanofi-Aventis	France	119,029
34	Roche	Switzerland	95,779
51	Amgen	US	72,92
53	Abbott Laboratories	US	72,677
55	Merck	US	71,474
65	Astra Zeneca	UK	64,35
77	Genentech	US	59,231
78	Eli Lilly	US	59,014
85	Wyeth	US	56,354
102	Bristol-Myers Squibb	US	49,692
125	Takeda Pharmaceutical	Japan	42,484
209	Schering-Plough	US	26,77
235	Bayer	Germany	24,144
301	Teva Pharmaceutical Industries	Israel	19,437
356	Novo Nordisk	Denmark	16,757
379	Gilead Sciences	US	16,105
434	Genzyme	US	14,385
489	Forest Laboratories	US	12,983
493	Schering	Germany	12,902

**National Percentage of Aggregated
Market Value for Pharmaceutical Firms in
the Global 500**

Source: Financial Times



US World Market Share in Pharma:

Sales: 48%

Production: 29%

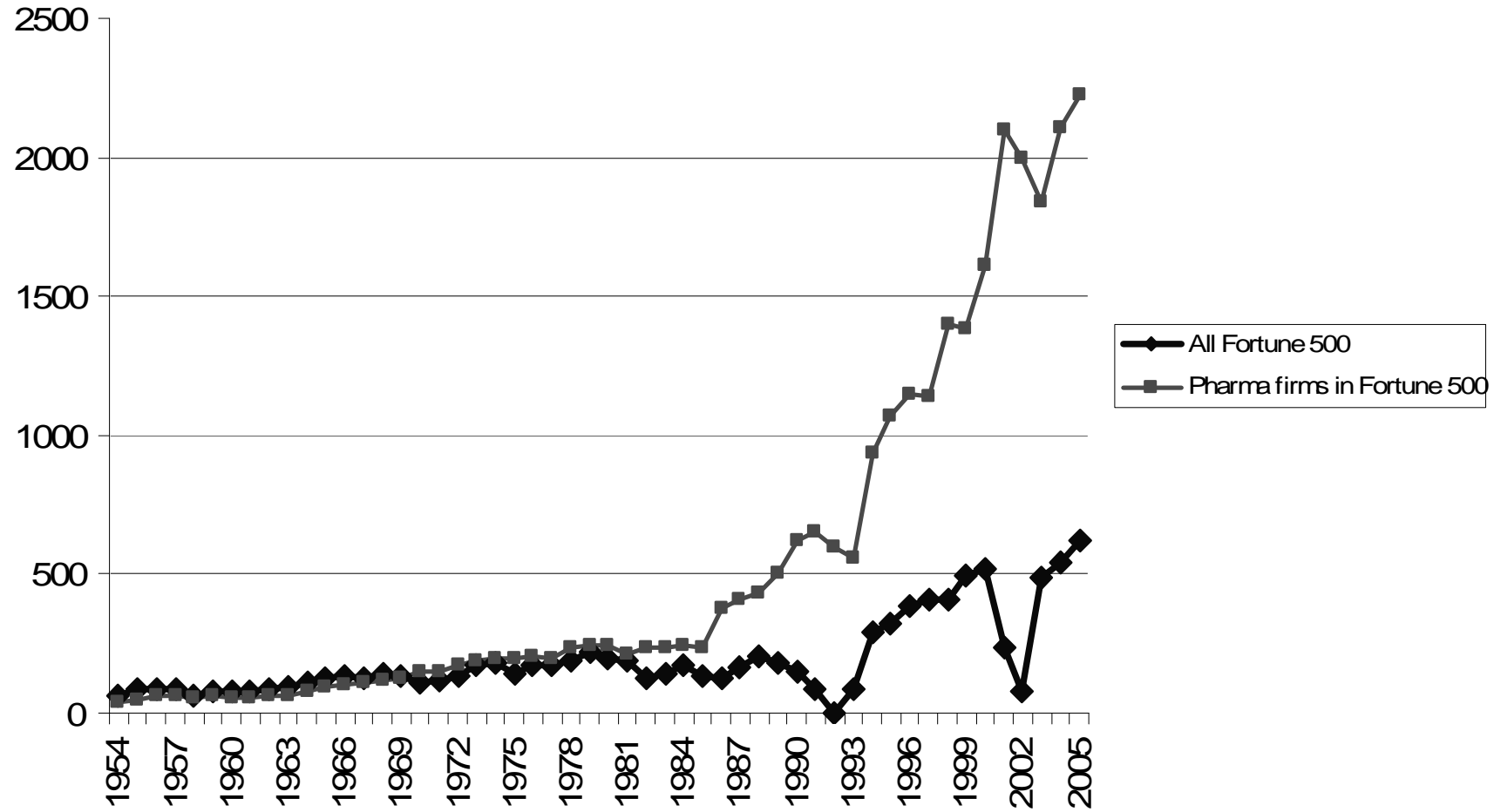
R&D: 49%

Source: IMS, EFPIA, OECD Health Data

Big Pharma Differential Accumulation;

Profits of an average US pharmaceutical firm as compared to an average firm in the Fortune 500 (1954-2005; in millions of constant 1984 US\$)

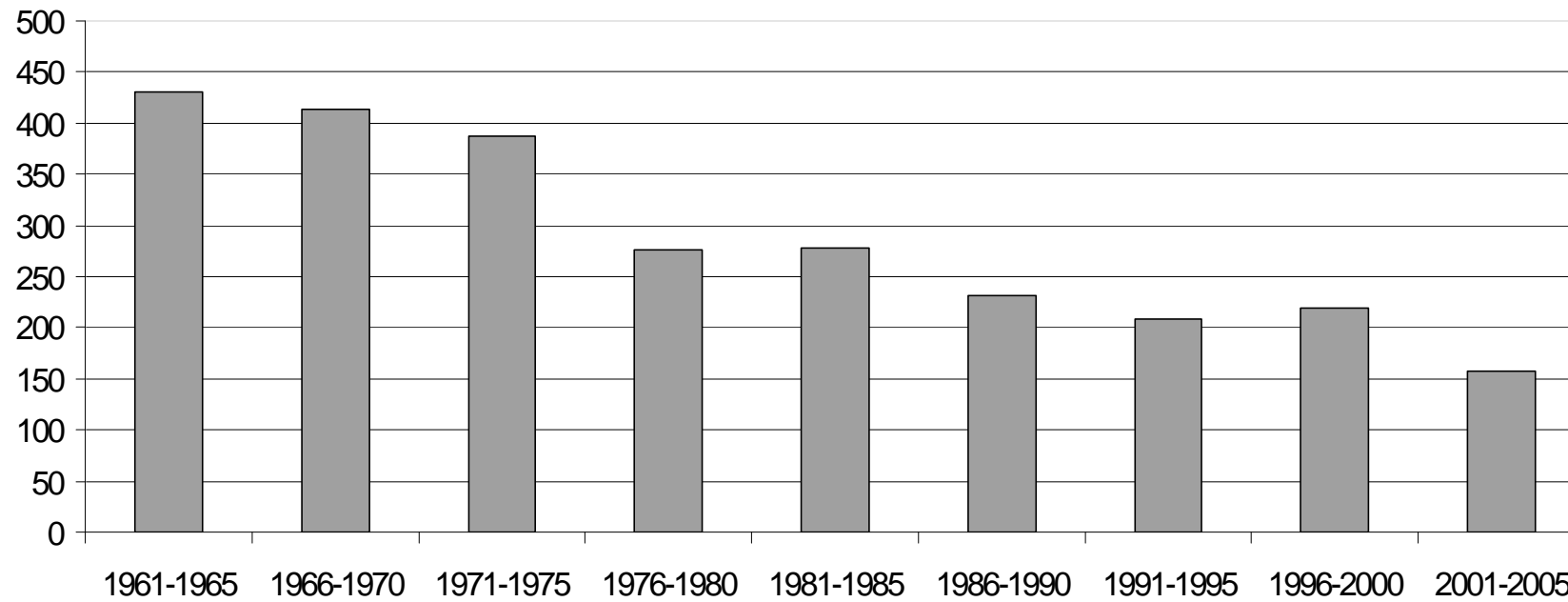
Source: Fortune



Are we entering a new era of innovation?

Global Introductions of New Chemical Entities 1961-2005

Sources: 1961-1985: Erika Reis-Arndt (1987)
1986-2005: IMS Lifecycle New Product Focus Database



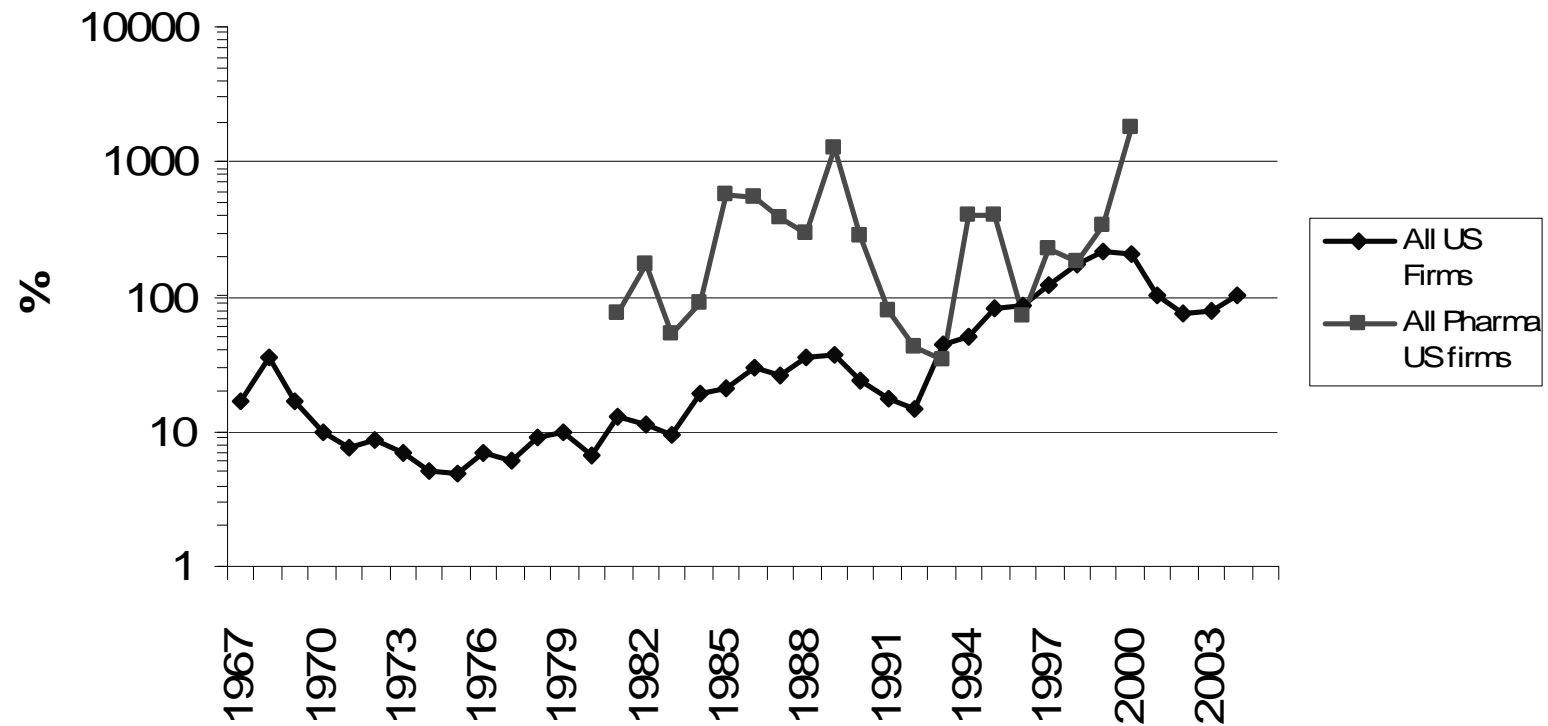
Breadth in Differential Accumulation BUY-TO-BUILD RATIO

Mergers and Acquisitions in proportion to Gross Capital Formation for US Pharmaceuticals and All US Sectors, 1981-2003 (log scale)

Source: -Bichler and Nitzan (2002)

-for all sectors: BEA and Statistical Abstract of the United States

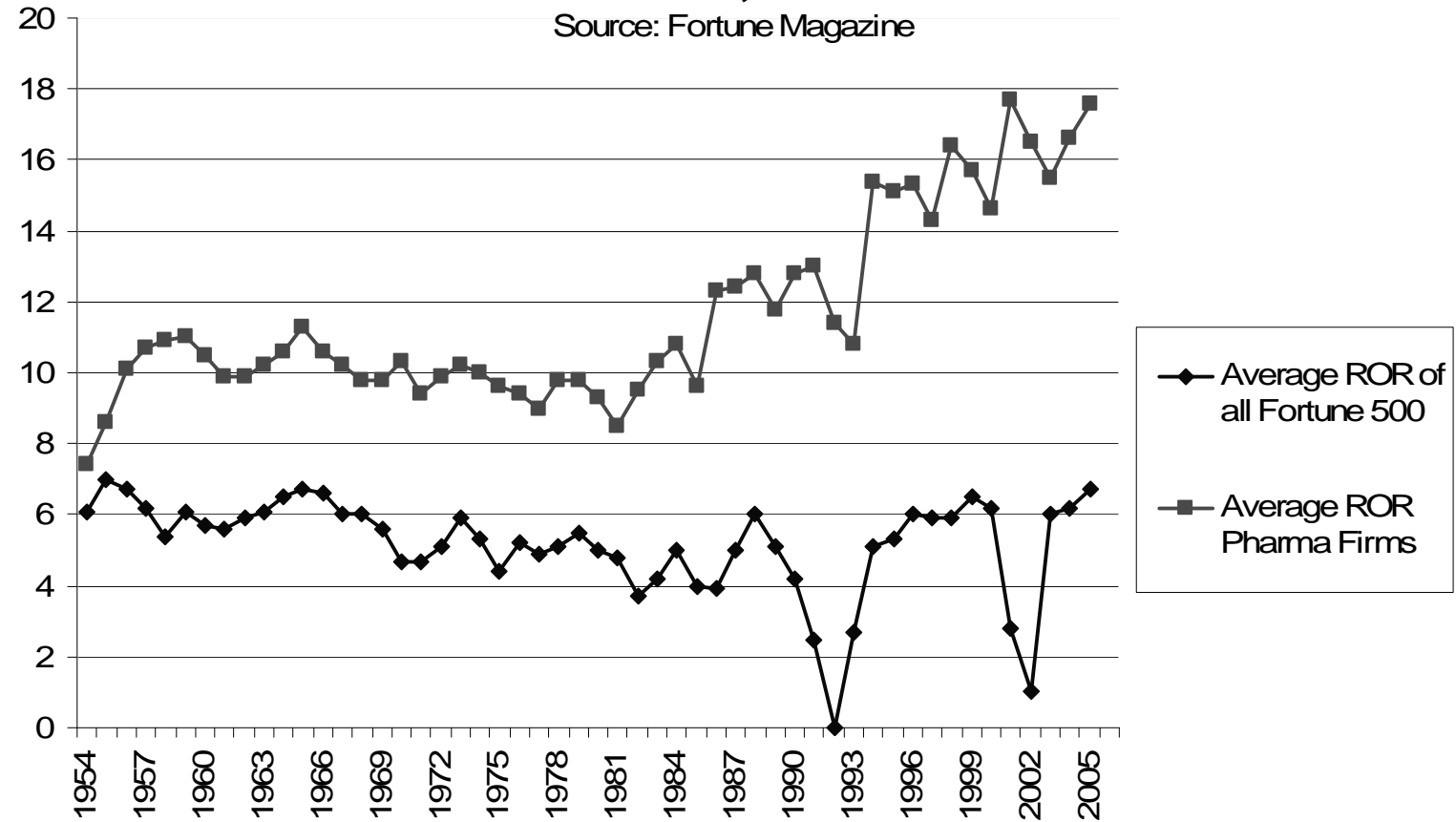
-for pharmaceuticals: OECD Health Data, Thomson Financial



Depth in Differential Accumulation

Differential Returns on Revenues (ROR) Between Big Pharma and Fortune 500, 1954-2005

Source: Fortune Magazine



CONCLUSION:

New economy Thesis and the Financialization Thesis are unable to account for structural transformations in the Global Pharmaceutical Business.

By considering capital in terms of power, of control over society, the differential accumulation analytical framework opens the way to new hypothesis:

- Structural Competition: Dominant Capitalist groups compete by transforming willingly the socio-economic institutional settings to increase their strategic control over the industry and society.
- M&As are a result of externalizing R&D where dominant firms simply buy back promising results by smaller firms or universities (Bayh-Dole Act in 1980).
- Differential ROR could maybe be explained by the extension of intellectual property rights resulting from the activism of American pharmaceutical companies (especially Pfizer).