

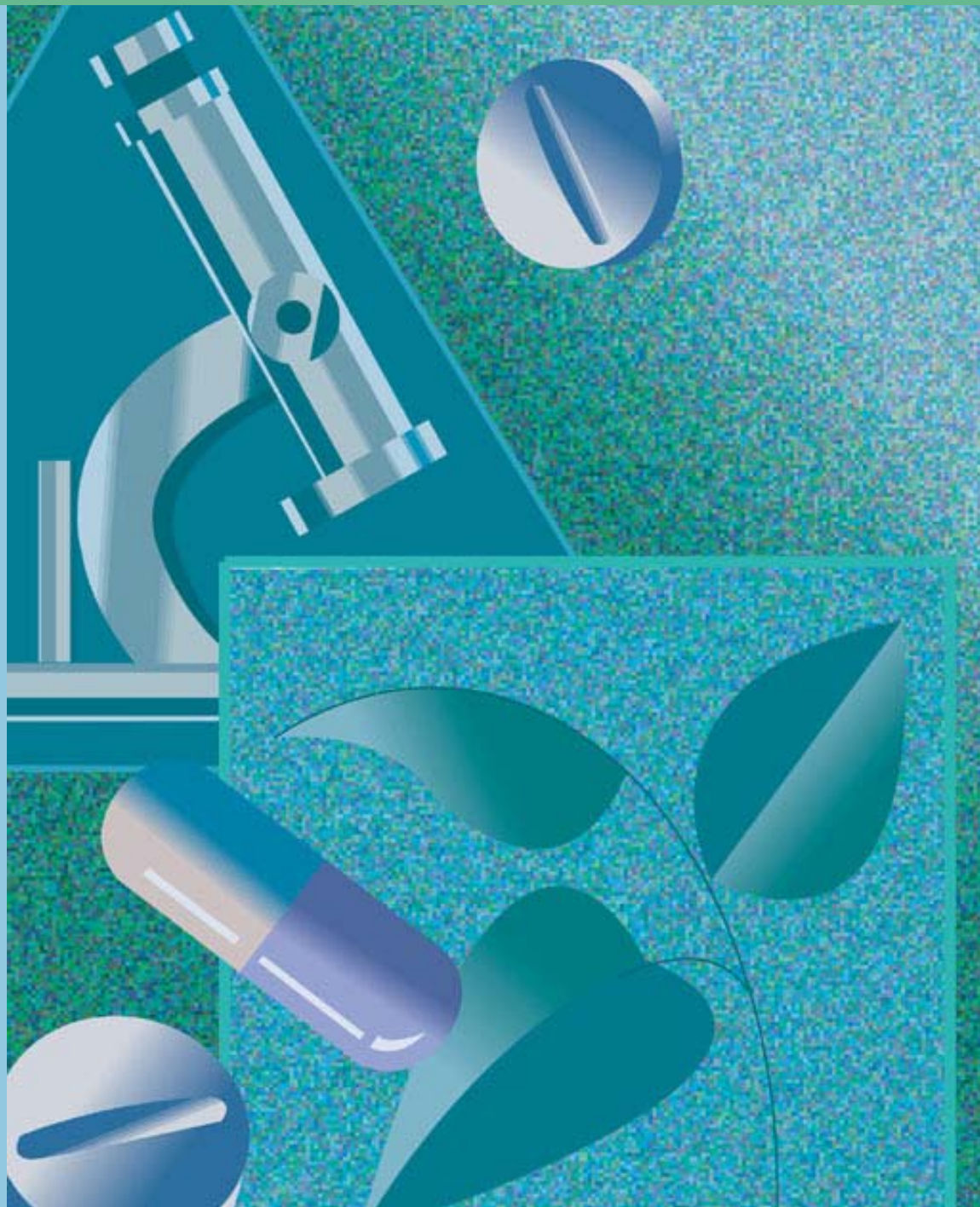
Biotechnological and Pharmaceutical Research and Development Investment Under a Patent-Based Access and Benefit-Sharing Regime

Timothy A. Wolfe and Benjamin Zycher

May 2005



755 Sansome Street, Suite 450
San Francisco, California 94111
Phone: 415-989-0833 /
800-276-7600
www.pacificresearch.org



Biotechnological and Pharmaceutical Research and Development Investment Under a Patent-Based Access and Benefit-Sharing Regime

Timothy A. Wolfe and Benjamin Zycher

May 2005

Pacific Research Institute
755 Sansome Street, Suite 450
San Francisco, CA 94111
Tel: 415-989-0833 / 800-276-7600
Fax: 415-989-2411
Email: info@pacificresearch.org
www.pacificresearch.org

Additional print copies of this study may be purchased by contacting us at the address above, or download the PDF version at www.PACIFICRESEARCH.ORG.

Nothing contained in this briefing is to be construed as necessarily reflecting the views of the Pacific Research Institute or as an attempt to thwart or aid the passage of any legislation.

©2005 PACIFIC RESEARCH INSTITUTE. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopy, recording, or otherwise, without prior written consent of the publisher.

Table of Contents

Executive Summary	1
I. Introduction	5
II. Research and Development Investment in the Context of ABS	8
III. Empirical Analysis of Research and Development Investment Under an ABS Regime	10
IV. Conclusions	15
Appendix A: Sensitivity Analysis With Respect To the Implicit ABS Tax Rates ...	A1
Appendix B: Creation of the Dataset	B1
Appendix C: Estimation of the Relative Sizes of the Pharmaceutical and Biotechnological Industries	C1
Appendix D: Country-Level Fixed Capital Stocks	D1
Appendix E: Country-Level Capital Stock Charts	E1
Appendix F: About the Authors	F1
Appendix G: About the Pacific Research Institute	G1

Executive Summary

Some pharmaceuticals are derived from plant and animal materials, and perhaps from numerous forms of “traditional knowledge” developed over time by various peoples around the world. These materials and knowledge thus have economic value, a fact recognized in the 1992 Convention on Biological Diversity treaty, now ratified by 188 countries. The treaty recognizes the property rights of nations with respect to their biological resources.

Implementation of the treaty is in progress. As that process unfolds, an effort is underway to change international patent law so as to give these nations the right to litigate over patent rights for biotechnological and pharmaceutical goods developed with their country’s biological materials and traditional knowledge. As currently envisioned, a patent lawsuit filed anywhere might result in the loss of a given biotechnological or pharmaceutical patent everywhere, an environment not conducive to improvement in the investment environment.

A group of developing nations—the Like-Minded Group of MegaDiverse Countries—is promoting this change in international patent law under a still-evolving Access and Benefit-Sharing (ABS) proposal for the Convention on Biodiversity. The ABS, the specifics of which have not been decided, carries significant potential implications for the future of biotechnological and pharmaceutical research and development investment. As a result, it would affect the evolution of preventative and therapeutic medicine that has the potential to alleviate human suffering.

Whatever the specifics of ABS prove to be, a patent-based system is equivalent analytically to a long-run tax on biotechnological and pharmaceutical research and development investment. It would have the effect of reducing such investment and thus the worldwide biotechnological and pharmaceutical capital stock over time.

This paper estimates biotechnological and pharmaceutical research and development flows, and thus the equivalent capital stocks, for the period 1985 through 2025 under an assumed patent-based ABS regime beginning in 2005. The estimates are made for 27 nations. For reasons discussed in the paper, the assumed long-run ABS tax on research and development investment is 50 percent for the biotechnology subsector and 20 percent for the pharmaceutical subsector.

Appendix A presents sensitivity analysis incorporating 35 percent and 14 percent implicit tax rates, respectively. Table S1 presents the findings for the 27 nations for the year 2025, while Table S2 summarizes the findings for the years 2005-2025 for the 27 nations taken as an aggregate.

By the year 2025, the patent-based ABS regime would reduce the biotechnological and pharmaceutical research and development capital stock by about \$144 billion (in year 2004 dollars), or almost 27 percent, for the 27 nations. This implies a loss of 150-200 new drugs. The cumulative loss to the 15 EU countries would be \$79 billion between now and 2025. By comparison, the United States would lose \$21.6 billion.

Nations considering adoption of the ABS framework would do well to consider these long-term implications.

Table S1
 Research and Development Capital Stocks With Patent-Based ABS, Year 2025
 (millions of 2004 dollars)

	Biotechnological	Pharmaceutical	Total	Decline	Percent Decline
Australia	1043	2323	3367	1393	29.3
Austria	1290	3756	5046	2038	28.8
Belgium	2223	7073	9295	3729	28.6
Brazil	178	708	886	245	21.7
Canada	2189	7853	10042	3930	28.1
China	1744	6864	8608	3440	28.6
Colombia	73	282	355	131	27.1
Denmark	2042	7896	9938	3782	27.6
Finland	178	686	865	318	26.9
France	2577	5820	8398	3094	26.9
Germany	5941	27735	33675	11878	26.1
Greece	331	1276	1607	611	27.6
India	2728	10527	13255	5008	27.4
Ireland	1754	6768	8522	3205	27.3
Italy	11722	40332	52054	20836	28.6
Japan	8814	43717	52531	17833	25.3
Korea	2758	10633	13391	5015	27.2
Malaysia	120	461	581	218	27.3
Mexico	2693	10402	13094	4994	27.6
Netherlands	281	993	1273	383	23.0
Peru	31	122	153	50	24.9
Portugal	368	1423	1791	678	27.5
Singapore	641	2481	3122	1198	27.7
Spain	1591	4833	6424	2591	28.7
Sweden	6046	32635	38680	13692	26.1
United Kingdom	6599	27139	33738	12143	26.5
United States	13160	49761	62921	21630	25.6
Total	79113	314500	393613	144061	26.8

Source: Authors' computations; Appendix D.

Note: Totals may not sum due to rounding.

Table S2
 Reductions in Biotechnological and Pharmaceutical R&D Capital Stock for 27 Nations
 Under A Patent-Based ABS Regime
 (millions of year 2004 dollars)

Year	Biotechnological	Percent Decline	Pharmaceutical	Percent Decline	Total	Percent Decline
2005	3405	7.1	3434	2.4	6839	3.6
2010	19368	29.4	19611	10.9	38979	15.8
2015	34794	39.8	35338	15.3	70133	22.0
2020	51537	44.9	52463	17.6	104000	25.2
2025	71327	47.4	72734	18.8	144061	26.8

Source: Authors' computations.

Note: Totals may not sum due to rounding.

I. Introduction

Among the numerous proposals and debates subsumed within the larger discussions of the Convention on Biological Diversity, the Access and Benefit-Sharing (ABS) issue carries with it significant potential implications for the future of biotechnological and pharmaceutical research and development investment, and thus for the evolution of preventative and therapeutic medicine, that is, for the future alleviation of human suffering. No ABS proposal with specifics sufficient for policy implementation has been made as of the spring of 2005; but the broader themes supported by proponents are sufficiently clear that important economic questions can be subjected to both conceptual and quantitative analyses.¹

In brief: A patent-based ABS regime would transfer some substantial part of the property rights to the returns from biotechnological and pharmaceutical research and development investments to the “owners” of the flora, fauna, and traditional knowledge from which the resulting intellectual property (i.e., a patent) is purported to stem in whole or in part. The term “owners” is used loosely, in that inevitably it is largely governments that would receive in whole or in part the rights to the returns from the investments. This transfer would be accomplished not through contractual mechanisms, but instead through a litigation process in which a lawsuit filed anywhere could result in the loss of a given pharmaceutical patent everywhere.

As discussed below, this system is analogous analytically to a long run tax on biotechnological and pharmaceutical research and development investment; because the biotechnological and pharmaceutical sectors writ large are a small part of the global market for investment capital, this implicit tax must have the effect of reducing such investment.² This paper presents empirical estimates of this effect for the period 2005 through 2025, computed as a reduction in the biotechnological and pharmaceutical research and development “capital stocks” for twenty-seven countries. Tables 1a and 1b summarize the estimated effects upon the respective research and development capital stocks for each of the twenty-seven countries in 2025. The total projected decline caused by a patent-based ABS system in the year 2025 is about \$144 billion (year 2004 dollars), or almost 27 percent.

¹ See, e.g., International Chamber of Commerce, “Access and Benefit-Sharing for Genetic Resources,” unpublished Discussion Paper, October 29, 2004. See also Government of India, Ministry of Environment and Forests, “Country Position on Access and Benefit Sharing and Traditional Knowledge,” January 13, 2005.

² In other words, the global market supply of capital to these sectors is highly (or “perfectly”) elastic, so that the tax would not affect the suppliers of capital by reducing the rate of return to their investments; as illustrated below, the effects of the tax manifest themselves entirely as reductions in research and development activity. Accordingly, the transfer through a patent-based ABS litigation process of some property rights to the returns from biotechnological and pharmaceutical research and development investment in this context is not a mere wealth transfer without resource allocation effects; incontrovertibly, it would shift some capital investment out of those sectors. Estimation of the quantitative magnitude of that shift is the central objective of this paper.

The intellectual property yielded by biotechnological and pharmaceutical research and development is a classic “collective” (or “public”) good: Once produced, it can be transferred through various means to second, third, and subsequent parties without

Table 1a
Research and Development Capital Stocks Without Patent-Based ABS Regime,
Year 2025
(millions of 2004 dollars)

	Biotechnological	Pharmaceutical	Total
Australia	1936	2825	4760
Austria	2462	4622	7084
Belgium	4294	8730	13024
Brazil	301	829	1131
Canada	4246	9726	13972
China	3476	8572	12048
Colombia	139	347	486
Denmark	3946	9774	13720
Finland	339	884	1183
France	4543	6948	11492
Germany	11364	34189	45553
Greece	638	1580	2218
India	5249	13014	18263
Ireland	3368	8359	11727
Italy	22875	50014	72890
Japan	16690	53674	70364
Korea	5282	13123	18406
Malaysia	229	570	799
Mexico	5207	12881	18088
Netherlands	471	1184	1654
Peru	57	147	203
Portugal	710	1759	2469
Singapore	1244	3076	4320
Spain	3071	5943	9015
Sweden	11811	40562	52372
United Kingdom	12497	33384	45881
United States	23996	60556	84551
Total	150440	387234	537674

Source: Authors’ computations; Appendix D.

Note: Totals may not sum due to rounding.

Table 1b
 Research and Development Capital Stocks With Patent-Based ABS Regime,
 Year 2025
 (millions of 2004 dollars)

	Biotechnological	Pharmaceutical	Total	Decline	Percent Decline
Australia	1043	2323	3367	1393	29.3
Austria	1290	3756	5046	2038	28.8
Belgium	2223	7073	9295	3729	28.6
Brazil	178	708	886	245	21.7
Canada	2189	7853	10042	3930	28.1
China	1744	6864	8608	3440	28.6
Colombia	73	282	355	131	27.1
Denmark	2042	7896	9938	3782	27.6
Finland	178	686	865	318	26.9
France	2577	5820	8398	3094	26.9
Germany	5941	27735	33675	11878	26.1
Greece	331	1276	1607	611	27.6
India	2728	10527	13255	5008	27.4
Ireland	1754	6768	8522	3205	27.3
Italy	11722	40332	52054	20836	28.6
Japan	8814	43717	52531	17833	25.3
Korea	2758	10633	13391	5015	27.2
Malaysia	120	461	581	218	27.3
Mexico	2693	10402	13094	4994	27.6
Netherlands	281	993	1273	383	23.0
Peru	31	122	153	50	24.9
Portugal	368	1423	1791	678	27.5
Singapore	641	2481	3122	1198	27.7
Spain	1591	4833	6424	2591	28.7
Sweden	6046	32635	38680	13692	26.1
United Kingdom	6599	27139	33738	12143	26.5
United States	13160	49761	62921	21630	25.6
Total	79113	314500	393613	144061	26.8

Source: Authors' computations; Appendix D.

Note: Totals may not sum due to rounding.

reducing the amount available for any one party.³ But the economic returns to the intellectual property investments automatically would be transferred as well, either among the recipients of the property rights or to the consumers of the attendant pharmaceutical products (in the form of lower prices in the short run), or both. Those returns thus are a “private” good. This is the sense in which the ABS regime analytically is analogous to a tax on both existing and future investments in intellectual property; efforts by second, third, and subsequent parties to capture some (or all) of the benefits of past investments made by others is a classic example of economic “rent-seeking,” that is, the acquisition of wealth through activities that are profitable privately but unproductive or economically destructive socially.⁴ Existing knowledge would remain available; but investment in the production of new knowledge would be reduced. As discussed below, these projected effects are sufficiently important that individual nations would be well advised to make decisions about ABS agreements with these findings in mind.

II. Research and Development Investment in the Context of ABS

The Simple Economics of Biotechnological and Pharmaceutical Investment. Intellectual property is an input in the production of biotechnological products and pharmaceuticals; as such, the demand for (or value of) such intellectual property is determined by (or derived from) the expected market value of the actual products and pharmaceuticals envisioned to result from the research and development investment. Investments are efficient (profitable expectationally) as long as the expected future return from the investment, adjusted for risk and other factors, is equal to or greater than the market rate of interest.

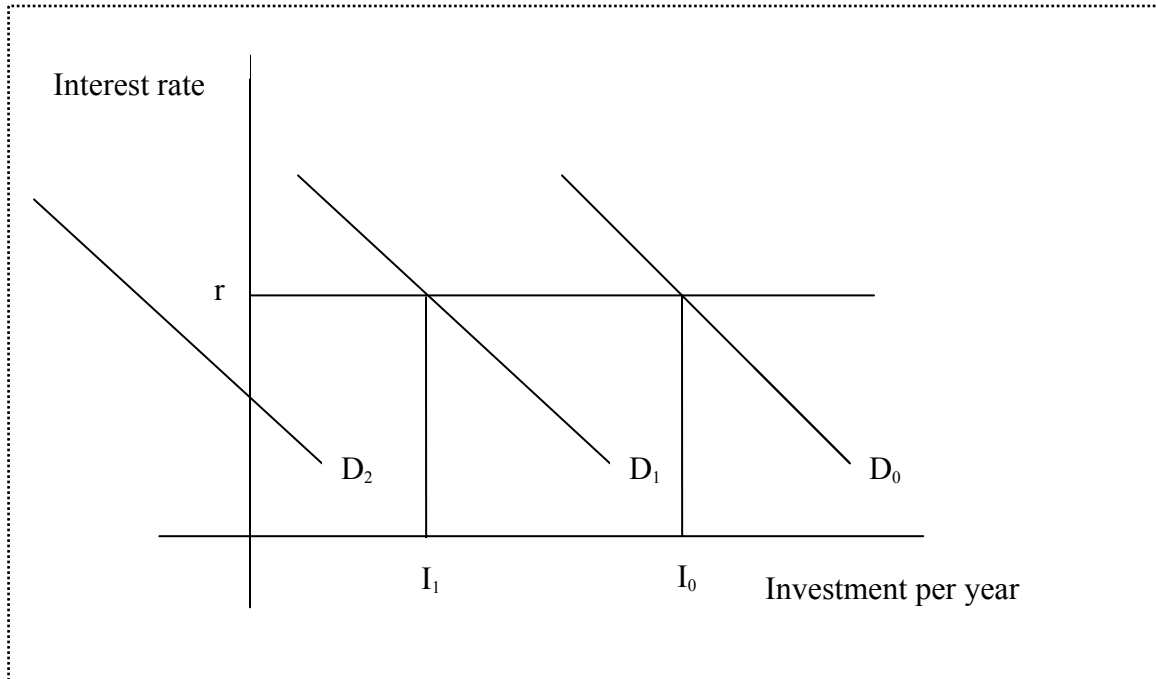
Chart 1 below illustrates this simple model. The market rate of interest is r , and the demand for (value of) biotechnological or pharmaceutical research and development investment in the absence of a patent-based ABS is D_0 , with total annual investment of I_0 . With a patent-based ABS system, the demand for investment falls to D_1 or D_2 , with total annual investment of I_1 or 0, respectively.⁵

³ The returns to such investments obviously are not collective goods; a transfer of some part of such returns leaves the initial investor with less. Only the knowledge itself is collective in nature; but it is a collective good only in the short run. In the long run, such research and development investment must compete for resources with all other goods.

⁴ See Jack Hirshleifer, *The Dark Side of the Force: Economic Foundations of Conflict Theory*, Cambridge: Cambridge University Press, 2001, chapter 5. See also Anne O. Krueger, “The Political Economy of the Rent-Seeking Society,” *American Economic Review* 64 (June 1974), pp. 291-304. Note that a transfer of the intellectual property value already existing is a transfer of “quasi-rents,” in that once the knowledge has been produced (i.e., the cost of producing it has been borne), its economic value (ultimately to consumers) is greater than the marginal (or incremental) cost (zero) of producing it.

⁵ For a classic discussion of the marginal efficiency of investment, see J. Hirshleifer, *Investment, Interest and Capital*, Englewood Cliffs: Prentice-Hall, 1970, chapters 3 and 6.

Chart 1



The Asymmetry of the ABS Tax and the Possible Zero Investment Outcome. The latter case of zero investment may seem extreme, but it is highly plausible under a broad set of conditions. Consider a market in which pharmaceutical research and development investments earn competitive returns (as contrasted with above-competitive returns); this outcome can obtain for two reasons. First, biotechnological products and drugs can be direct competitors within and across product lines; when finally brought to market, prices may yield only competitive rates of return.⁶ Second---and more fundamentally in the context of ABS---biotechnological and pharmaceutical producers invest in a portfolio of potential new products and drugs; it is efficient (profitable) for such investments to be made until the marginal investment is expected (*ex ante*) to yield only the market rate of return r .⁷ But not all such investments in fact will yield returns greater than or equal to r ; some will prove to be losers. Some years will be relatively profitable in terms of research and development success and the market prices received for drugs, while other years will be afflicted with relatively heavy losses; *ex ante*, therefore, investment outcomes over time are “stochastic,” that is, subject to random influences, so that the statistical

⁶ Thus do so-called “me-too” drugs yield competition, rather than a waste of investment resources as some observers have argued. With or without competitive conditions at retail, a drug with full patent protection can yield returns above, equal to, or below competitive levels, depending upon past costs, production costs defined broadly, and market prices.

⁷ The interest rate r in this context is the market rate for the relevant risk class of investments.

distribution of returns over time has an average equal to the market rate of interest adjusted for perceived risk.⁸

But a patent-based ABS regime would not impose the implicit tax discussed above randomly; it is the proven winners that disproportionately would be subjected to patent litigation. And so ABS would create a bias in the dynamic statistical distribution of expected returns: Upside potential for winners would be reduced, while downside potential for losing investments would remain unaffected. This means that the entire distribution of expected returns would be shifted to the left (or downward); if the mean expected return over time in the absence of ABS is at the market rate of interest r , ABS must reduce it below r , resulting in a sharp reduction in investment or zero (or near zero) investment.⁹ The only way for a producer to avoid this outcome is to reduce or eliminate investment in new drugs either riskier or prospectively less profitable, a market adjustment with highly adverse implications.¹⁰

III. Empirical Analysis of Research and Development Investment Under an ABS Regime

The Assumed Investment Effect of the Patent-Based ABS Tax. The zero investment outcome is wholly plausible for the reasons discussed above, but depends upon the statistical distribution of expected returns across potential biotechnological products and drugs, a topic far outside the scope of this paper.¹¹ In the context of Chart 1, we assume, conservatively, a downward shift in the demand for research and development investment from D_0 to D_1 (rather than to D_2). More specifically, we assume for analytic purposes that the tax reduces research and development investment proportionately, by 50 percent for biotechnological investment, and by 20 percent for other pharmaceutical investment.¹²

⁸ If this were not the case---if the mean expected return were higher than the market rate of interest---new producers would enter the market, driving down future expected prices and thus the expected returns to investment.

⁹ In the extreme case, the upper end of the statistical distribution of expected returns simply would be “cut off” (truncated).

¹⁰ That is, producers can restore (imperfectly) the mean expected return at r by truncating the lower end of the statistical distribution.

¹¹ One could argue that pharmaceutical investment is so profitable that a patent-based ABS would have no effect on investment; but if that were the case, we would expect to see substantial entry of new producers into the market. We do not.

¹² In other words, we assume that an ABS tax of x percent of revenue would reduce research and development investment by x percent. The 50 percent assumption for biotechnological investment is a reasonable compromise between the possibility of significantly lower implicit tax rates and the possibility discussed above that the ABS tax might be significantly higher or that it might reduce investment to zero; in addition, see the discussion following immediately below. The 20 percent assumption for other pharmaceutical research and development investment is a reasonable starting point for analysis given that the parameters of potential patent challenges under ABS have not been defined, and given that such biologic factors as antigens can play a role in the research and development process. No one knows how a future ABS might treat property rights to such antigens or other factors. The analysis presented here can be changed when the specifics of a patent-based ABS proposal become clear.

These assumed tax rates are likely to be reasonable or even conservative for analysis of incremental investment decisions (that is, marginal investments) even apart from the fact that we assume away the case in which investment goes to zero as a result of the ABS tax.¹³ This is true for three reasons.

- Even without the asymmetry problem afflicting a patent-based ABS regime as it surely would emerge in practice, zero investment, again, is a wholly plausible outcome. Consider a pharmaceutical investment expected to cost \$800 million to bring to market.¹⁴ The present value of the expected revenue stream must be at least \$800 million for the investment to be efficient. For marginal investments, a reduction of that expected revenue stream reduces investment not proportionately, but entirely, as the marginal return falls below the market rate of interest, that is, the opportunity cost of capital. An assumption of a 50 percent for biotechnological investment is a reasonable (or conservative) compromise between a low ABS tax and the realistic possibility of a zero investment outcome. In the context of other pharmaceutical research and development investment, the 20 percent assumption may be conservative.¹⁵
- The Bayh-Dole Act of 1980 transferred from U.S. government agencies to universities and other nonprofit organizations the property rights to the inventions created by the respective research organizations, with allowable profit participation by their researchers. Before implementation of this Act, the sponsoring agencies held the property rights, with organizational/researcher participation allowed at the discretion of the agencies. Bayh-Dole thus strengthened the property rights of the nonprofits and researchers in their inventions, creating economic conditions crudely analogous to those without a patent-based ABS system in the biotechnological and pharmaceutical context. Before 1980, universities and other nonprofit institutions accounted for less than 1

¹³ For purposes of sensitivity analysis, Appendix A presents summary findings for the case in which the implicit tax imposed upon biotechnology research and development is 35 percent, and that for pharmaceuticals is 14 percent.

¹⁴ See, e.g., J. Dimasi, R. Hansen, and H. Grabowski, "The Price of Innovation: New Estimates of Drug Development Costs," *Journal of Health Economics*, 22 (2003), pp. 151-185. See also Christopher P. Adams and Van V. Brantner, "Estimating the Costs of New Drug Development: Is It Really \$802M?," December 2004. We assume for simplicity here that this figure is a present value. More generally, consider a biotechnological or pharmaceutical investment expected to cost C , after which expected revenues during the patent period are PQ , where P is price, and Q is quantity sold. The patent period is g years, after which expected revenues are pq , where after the patent period p and q are the parameters analogous to P and Q . An unbiased first approximation of the present value of expected profit π in the absence of ABS is $\pi = [(PQ/r) - (PQ/(r(1+r)^g)) + pq/r(1+r)^g] - C$. For simplicity, we assume that C is a cost borne entirely at the beginning of the investment period; this is the same analytically as a computation of the present value of the cost stream. The ABS tax leaves C unaffected but reduces net revenues during the g years of the patent period; this may be sufficient to reduce the present value of the revenue stream below C , with an outcome of zero investment.

¹⁵ See fn. 12.

percent of all high-tech patents¹⁶, with an annual growth rate during 1969-1979 of 3 percent. That growth rate increased to 6 percent during the twenty years

- following the passage of Bayh-Dole. At the rate of patent accumulation from the pre-1980 period, nonprofit institutions would have added 10,620 patents between 1980 and 1999, about 41 percent less than the 18,135 actually added during the period. On an annual basis, patent accumulation would have averaged 35 percent less in the absence of Bayh-Dole. Obviously, patent accumulation and capital formation are different parameters, however related; but the fact that the 35 percent figure is the midpoint between our assumed 20 percent and 50 percent implicit tax rates provides some evidence that our assumptions are reasonable.
- The value of a substance or of knowledge obtained at the outset of a long period of research and development is far less than the value of that substance or knowledge once embodied in a successful product or drug. Consider a development process envisioned to consume ten years, beginning with 10,000 candidate new molecular entities (NMEs). The number of NMEs under active consideration falls exponentially over time, but the annual cost of the research and development project does not.¹⁷ This means that at any point during the development process, the rights to a given NME are worth less than the future value of the drug if successful. Consider for example the beginning of the tenth year, in which, say, four candidate NMEs remain viable as potential “billion dollar” drugs. Completion of clinical trials for the four is expected to cost \$64 million (8 percent of \$800 million), or \$16 million per candidate. If each candidate drug has a 25 percent probability of proving successful, each analytically is an option worth $(.25) \times [(\$1 \text{ billion} - (0.2) \times (\$800 \text{ million}) - \$64 \text{ million})] = \194 million . Under these assumptions, each of the initial NMEs at the outset of the development process (at the beginning of year 1) would have been worth only \$20,000. This insight illuminates one of the important biases in the patent-based ABS regime: Confiscation of patents through a litigation process ignores the fact that most of the intellectual property embodied in a drug is the product of years of research and development investment subsequent to the initial identification of the candidate NMEs. An ABS regime based upon contractual negotiation would recognize this reality.

The Dataset. For purposes of analysis, we have gathered pharmaceutical investment data, converted to year 2004 dollars, for the period 1985 through 2003 for the twenty-seven nations listed in Table 1a. Note that some missing data have been interpolated and extrapolated, as discussed in Appendix B. The sources of the data are

¹⁶ We identified 1822 universities and other nonprofit institutions granted patents during 1969 through 1999, limiting the analysis to patent classes 2, 3, and 4 in Hall, *et. al.*, referenced below in fn. 19.

¹⁷ See European Federation of Pharmaceutical Industries and Associations, “Today’s Research, Tomorrow’s Cures,” 2004. Roughly 8 percent of total development costs are incurred each year, with the remaining 20 percent spent on the regulatory approval process and post-approval monitoring.

the United Nations Industrial Development Organization and the Organization for Economic Cooperation and Development.¹⁸

The research and development investment data are divided into biotechnological and pharmaceutical subsets, under the assumption that the implicit ABS tax would affect the two subsectors differently. For purposes of allocating total investment between the two subsectors, we have used the available data on total patents by country and time period, employing judgments to classify patents respectively as biotechnological and pharmaceutical.¹⁹ The compound growth rates for the historical period were used to project annual investment data for each country out to the year 2025.²⁰ Accordingly, the dataset is for the period 1985-2025 for each of the twenty-seven nations listed in Table 1a.²¹

These annual investment data allow us to calculate biotechnological and pharmaceutical research and development capital stocks with and without the ABS tax. At the outset of 1985, the capital stock is assumed to be six times 1984 investment; this is a standard assumption used in a number of published economic analyses.²² Annual depreciation is assumed at 8 percent, so that for each year, the capital stock is that remaining from the previous year, plus new investment.²³ Table 2 presents computations of the biotechnological and pharmaceutical research and development capital stocks for the twenty-seven nations in total in the absence of the ABS tax, at five-year intervals. Table 3 presents similar computations with the patent-based ABS tax discussed above, assumed to be imposed in 2005; and Table 4 presents the projected decline in the capital stocks caused by the ABS tax.

¹⁸ United Nations Industrial Development Organization, *Industrial Statistics Database*, INDSTAT4, 2003, ISIC Rev. 2 and 3; and Organization for Economic Cooperation and Development, STAN Database, at www.oecd.org/sti/stan.

¹⁹ See B.H. Hall, A.B. Jaffe, and M. Trajtenberg, "The NBER Patent Citation Data File: Lessons, Insights, and Methodological Tools," National Bureau of Economic Research Working Paper 8498, 2001; and the data at http://emlab.berkeley.edu/users/bhhall/pat/pat63_02f.zip.

²⁰ In some cases in which data anomalies and other problems yielded less confidence in the 1985-2003 growth rates, a different period and/or a nation grouping average was used to generate an investment growth rate for projection purposes.

²¹ The data are shown in Appendix D.

²² See, e.g., Charles Wolf, Jr. and Benjamin Zycher, *European Military Prospects, Economic Constraints, and the Rapid Reaction Force*, RAND Corporation MR-1416-OSD/SRF, 2001.

²³ *Ibid.* Because the central question addressed in this paper is the effect of a patent-based ABS regime on the projected biotechnological and pharmaceutical research and development capital stock in the year 2025, the initial capital stock assumed for 1985 is far less important than may seem to be the case, in that under an assumed annual depreciation rate of 8 percent, less than 5 percent of the 1985 capital would remain in 2025.

Table 2
Biotechnological and Pharmaceutical R&D Capital Stock for 27 Nations
Without Patent-Based ABS Regime
(millions of year 2004 dollars)

Year	Biotechnological	Pharmaceutical	Total
2000	33238	115141	148379
2005	48078	142040	190118
2010	65934	180358	246292
2015	87515	230934	318449
2020	114889	298064	412953
2025	150440	387234	537674

Source: Authors' computations.

Note: Totals may not sum due to rounding.

Table 3
Biotechnological and Pharmaceutical R&D Capital Stock for 27 Nations
With Patent-Based ABS Regime
(millions of year 2004 dollars)

Year	Biotechnological	Pharmaceutical	Total
2000	33328	115141	148379
2005	44673	138606	183279
2010	46567	160746	207313
2015	52721	195596	248316
2020	63352	245602	308953
2025	79113	314500	393613

Source: Authors' computations.

Note: Totals may not sum due to rounding.

Table 4
 Reductions in Biotechnological and Pharmaceutical R&D Capital Stock for 27 Nations
 Under A Patent-Based ABS Regime
 (millions of year 2004 dollars)

Year	Biotechnological	Percent Decline	Pharmaceutical	Percent Decline	Total	Percent Decline
2005	3405	7.1	3434	2.4	6839	3.6
2010	19368	29.4	19611	10.9	38979	15.8
2015	34794	39.8	35338	15.3	70133	22.0
2020	51537	44.9	52463	17.6	104000	25.2
2025	71327	47.4	72734	18.8	144061	26.8

Source: Authors' computations; Tables 2 and 3.

Note: Totals may not sum due to rounding.

The projected decline in the 2025 biotechnological and pharmaceutical capital stock is over \$144 billion in 2004 dollars, or almost 27 percent.

IV. Conclusions

These computations are based upon conservative assumptions with respect to the magnitude of the patent-based ABS tax imposed upon biotechnological and pharmaceutical investment, and assume away the realistic case in which some substantial amount of investment goes to zero as expected returns fall below the market rate of interest. Under a proportionality assumption with respect to the relationship of capital investment to the flow of new and improved medicines, the reduction of over \$144 billion in the year 2025 capital stock implies a loss of 150-200 drugs.²⁴

Whether this effect is justified by an effort to transfer the property rights discussed above to the purported owners of “traditional” knowledge or the requisite flora and fauna is a normative topic beyond the scope of this paper. It is, however, an effect that cannot be ignored if the goal of human wellbeing remains central to policy objectives. Nations considering adoption of the ABS framework would do well to consider these findings as an input in their decisionmaking processes.

²⁴ See the references cited in fn. 14.

Appendix A: Sensitivity Analysis With Respect To the Implicit ABS Tax Rates

This appendix presents projections for the twenty-seven nations, individually and in the aggregate, under assumed tax rates of 35 percent and 14 percent for biotechnological and pharmaceutical research and development capital stocks, respectively, in the year 2025.

With implicit tax rates of 50 percent and 20 percent, respectively, the projected effect in the year 2025, as shown in Table 1b, is a capital stock decline of about \$144 billion (year 2004 dollars), or almost 27 percent. With the lower tax rates, the projected effect is almost \$101 billion, or almost 18 percent.

Table A1
Research and Development Capital Stocks With Patent-Based ABS, Year 2025
Sensitivity Case: 35 percent and 14 percent implicit tax rates
(millions of 2004 dollars)

	Biotechnological	Pharmaceutical	Total	Decline	Percent Decline
Australia	1,311	2,474	3,785	975	20.5
Austria	1,642	4,016	5,658	1,426	20.1
Belgium	2,844	7,570	10,414	2,610	20.0
Brazil	215	744	959	172	15.2
Canada	2,806	8,415	11,221	2,751	19.7
China	2,264	7,377	9,640	2,408	20.0
Colombia	93	302	394	92	18.9
Denmark	2,613	8,460	11,073	2,647	19.3
Finland	227	734	960	223	18.8
France	3,167	6,159	9,326	2,166	18.8
Germany	7,568	29,671	37,239	8,314	18.3
Greece	423	1,367	1,790	428	19.3
India	3,484	11,273	14,757	3,506	19.2
Ireland	2,238	7,245	9,483	2,243	19.1
Italy	15,068	43,237	58,305	14,585	20.0
Japan	11,177	46,705	57,881	12,483	17.7
Korea	3,515	11,380	14,895	3,510	19.1
Malaysia	152	494	646	153	19.1
Mexico	3,447	11,146	14,593	3,496	19.3
Netherlands	338	1,050	1,387	267	16.1
Peru	39	129	168	35	17.4
Portugal	471	1,524	1,995	475	19.2
Singapore	822	2,660	3,481	838	19.4
Spain	2,035	5,166	7,201	1,813	20.1
Sweden	7,775	35,013	42,788	9,584	18.3
United Kingdom	8,369	29,013	37,381	8,500	18.5
United States	16,410	53,000	69,410	15,141	17.9
TOTAL	100,511	336,320	436,832	100,843	18.8

Appendix B: Creation of the Dataset

The data were derived chiefly from the UNIDO Indstat4, which actually is two datasets, respectively ISIC ver.2 and ISIC ver.3. As these names suggest, the former provides data coded according to International Standard Industrial Classifications version 2, while the latter is coded using version 3 of the same system.

Combining the Two Datasets. There arise two potential challenges when combining these two datasets. First, the classification that encompasses the biotechnological and pharmaceutical industries changed slightly between version 2 (which featured code 2522—Manufacture of Drugs and Medicines) and version 3 (which featured code 2423—Pharmaceuticals, medicinal chemicals, etc.) Second, Gross Fixed Capital Formation data for a given country in a given year may appear in both datasets, but not show identical values.

Neither of these issues proved to be substantial. Only three nations have data that overlap in the datasets. In all three cases, concordance is so strong as to suggest no practical difference between ISIC ver.2 code 2522 and ISIC ver.3 code 2423. **Korea** reports values in both datasets for the years 1992 to 1995 that are identical in every year. **Austria** reports values in both datasets for the years 1990 to 1994. In no case do the data differ by more than 0.03%. **Singapore** reports values in both datasets for the years 1991 to 1994. The data differ by far less than 1% except in 1994 when they diverge by 1.2%. For both **Austria** and **Singapore** we averaged data for years in which two values were available.

Handling Missing or Fragmented Data. The INDSTAT4 datasets rely on data reported by each nation covered. For this reason, the periods covered may differ from country to country. In some cases the OECD's STAN database provided capital formation data for OECD members for years in which these data did not appear in INDSTAT4. Though the data are similar, we could not adequately reconcile the two capital formation measures to allow us to combine the two datasets. **Canada** is the sole exception. STAN offers a very complete time series on Canadian capital formation, while INDSTAT4 offers none. For this reason, **Canada** is the only nation in our sample for which STAN rather than INDSTAT4 data are used.

Australian capital formation data are available in the INDSTAT4 dataset; however, the ISIC code for Pharmaceuticals (2423) is not. Instead, Australia uses a superset code (2411A) that includes basic chemicals, fertilizer, and pharmaceuticals. To estimate the fraction of pharmaceuticals in this group we used INDSTAT4 data on the chemical and fertilizer industries in the United States and the United Kingdom. With these data we calculated the equivalent of code 2411A data for the US and the UK. On average in these nations, 51% of the capital formation in the synthetic 2411A classification is in the pharmaceutical industry. We estimate Australian capital formation data as 51% of the figure for code 2411A. The resulting figures are of a reasonable magnitude, but suggest a declining rate of capital formation that is not entirely consistent with other data on the Australian biotechnological and pharmaceutical sectors. For

example, STAN data suggest consistently strong growth in Australian research and development spending in the pharmaceutical industry.¹ Thus our estimates may understate the effect of a patent-based ABS regime on the economy of Australia.

China did not report any capital formation data for its pharmaceutical industry; however, data are available for both Hong Kong and Macao. We estimate Chinese figures as a simple sum of the data for Hong Kong and Macao.² Although this is intended to be a very conservative approach, an underestimate of the magnitude of Chinese investment may increase the likelihood that Chinese growth estimates will be subject to a low base effect and thus, overestimate the future growth rate of capital stock.

INDSTAT4 Ver. 2 reports data for **West Germany** for the years 1989 to 1993. INSTAT4 Ver. 3 reports data for a reunified **Germany** for the years 1994 to 2000. Our data series for Germany is simply the union of these two INDSTAT4 series.

Interpolation and Extrapolation. Because data availability varies from country to country, most nations require some extrapolation of data, not just in the future, but in the past. Table B1 indicates the years for which each country's data are extrapolated or interpolated. After 2003, all data are extrapolated.

Our model estimates exponential growth rates for capital formation in each country. However, we impose some structure on this model in order to keep estimation error in early periods from mushrooming in later periods. Countries that show exceptionally rapid growth are subjected to a simple regression toward the mean. That is, each year, the growth rates for these nations are assumed to decrease by one percentage point until they reach the average rate (6.8 percent) for our entire sample. Sweden is the sole exception to this approach. We initially calculated a growth rate for Sweden of 45%, based on just two years of data. Both because this result rests on very limited information, and because this is an unreasonable long-term growth rate, we applied an initial growth rate of 17%—the second largest value observed for a European Nation. We then assume this value to decline by one point in each subsequent year.

¹ For a fuller discussion, see George Messinis, "The Australian Pharmaceutical Industry and its Global Context," Working Paper No. 7, *Pharmaceutical Industry Project*, Centre for Strategic Economics Studies, Victoria University of Technology, September 2002. There are several other papers in this series that also provide detailed descriptions of the Australian pharmaceutical industry.

² When data were available for Hong Kong, but not Macao, Macao's annual rate of capital formation was simply taken to be its average annual rate. This is because there was too much variance in Macao's data to identify a meaningful trend.

Table B1
Extrapolated and Interpolated Data by Nation by Year

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Australia	X	X	X	X	X	X	X	X	X	X								X	X
Austria	X	X	X	X	X												X	X	X
Belgium	X															X	X	X	X
Brazil	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X
Canada																			
China	X	X	X	X	X	X	X										X	X	X
Colombia	X	X															X	X	X
Denmark																	X	X	X
Finland	X	X	X													X	X	X	X
France	X	X	X	X	X												X	X	X
Germany	X	X	X	X												X	X	X	X
Greece	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X
India	X	X	X	X												X	X	X	X
Ireland	X	X	X	X	X	X										X	X	X	X
Italy	X	X	X	X											X	X	X	X	X
Japan	X	X	X	X												X	X	X	X
Korea	X	X	X	X	X											X	X	X	X
Malaysia	X	X	X	X	X	X	X	X								X	X	X	X
Mexico																	X	X	X
Netherlands	X	X														X	X	X	X
Peru	X	X	X										X	X	X	X	X	X	X
Portugal	X	X	X												X	X	X	X	X
Singapore	X	X	X	X													X	X	X
Spain	X	X	X														X	X	X
Sweden	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X
United Kingdom	X	X	X	X	X	X										X	X	X	X
United States	X	X	X	X	X	X	X									X	X	X	X

In addition to our mean regression rule for fast-growing nations, we also assume some improved performance by laggard developing nations. Brazil, Colombia, Malaysia, and Peru show high variance in their data series, as well as conspicuous declines in their final-year data. In each of these cases we extrapolate one year as the mean of capital accumulation in all previous data. We then calculate a growth rate through the first extrapolated year, and allow this rate to grow toward our sample average of 6.8%.³

For several reasons, we did not take this same approach with developed nations. First we chose to err on the side of underestimating capital growth in large developed nations because overestimates of these numbers could easily result in substantial overestimates of our total capital stock numbers. Additionally, the data for developed economies are far less erratic than those of developing nations, and the trends they suggest are more reliable. Finally, it is reasonable, albeit still quite conservative, to

³ We took this same approach with Australia. Although it is a developed nation, it is the only developed nation for which we were forced to estimate primary data. Moreover, we have reason to believe that the Australian negative capital formation trend may be an artifact of our estimation technique.

assume that the pharmaceutical, and biotechnological industries in nations such as the United State are moving into a more staid growth phase.

The two nations most strongly affected by this approach are **France** and the **Netherlands**. Both show essentially flat growth over the period for which data are available and are therefore projected to exhibit lackluster performance through 2025. Table D20 and D40 show 2025 non-ABS capital stocks for these nations of \$11.5 billion and 1.7 billion respectively. Had we assumed positive mean regression, these figures would have been \$28.2 billion and 4.2 billion. We will leave it to future research, and the best judgment of policy makers to decide whether we have understated the potential cost that patent-based ABS could impose on developed nations.

Exchange Rates and Deflators. INDSTAT4 data are compiled in local currencies. The dataset also provides a set of current dollar exchange rates for each country represented in each year represented. We used these exchange rates for all conversions from local currency to dollars, with one exception. Our data for Canada extended through 2003, but INDSTAT4 did not provide a CND/USD exchange rate for 2003. In this one instance, we used a value from the Bank of Canada's Financial Markets Department.⁴

We converted each year's current dollars to constant 2004 dollars using chain-type price indexes for nonresidential gross private domestic fixed investment.⁵

⁴ <http://www.bankofcanada.ca/pdf/nraa03.pdf>. In 2001 and 2002, these annual rates agreed with INDSTAT4 rates to at least the third decimal place.

⁵ Table B-7, *Annual Report of the Council of Economic Advisers*, February 2005.

Appendix C: Estimation of the Relative Sizes of the Pharmaceutical and Biotechnological Industries

One shortcoming of datasets that provide international industry-level data is that industries tend to be grouped into rather broad categories that do not allow us to draw fine distinctions between sub-sectors of the pharmaceutical industry writ large. In substantial part, this is because they use such commonly agreed upon classification systems as ISIC. Another challenge is the general disagreement about the definition of biotechnology.¹ For our purpose, it is most important to distinguish between those products and technologies that are most dependent, in whole or in part, on flora and fauna. To this end, we define biotechnology² as technology that harnesses cellular or sub-cellular processes to solve problems, conduct research, or create goods and services. It also includes a diverse collection of technologies that manipulate cellular, sub-cellular, or molecular components of living things as well as technologies for modifying plants, animals, and microorganisms to carry desired traits.

Although we cannot directly use this definition to subdivide INDSTAT4 data, we can turn to United States patent data to better understand the changing character of the pharmaceutical research, both over time and across countries. We can then use these results to refine the INDSTAT4 data.

US patent data provide a reliable guide to global research and development for two reasons. First, the cost of applying for a U.S. patent is low relative to the costs found in most of the industrialized world. Second, a U.S. patent secures intellectually property rights in the world's largest and most dynamic national market. Because people and firms from around the world are free to apply for U.S. patents, and because U.S. patents are both cheap and valuable relative to their international counterparts, U.S. patent data reasonably can be seen as a window on innovation worldwide.

Our patent data³ allow us to classify innovations at the 3-digit Patent Code level, which offers finer sub-sector distinctions than ISIC. We identified 6 codes that commonly encompass pharmaceutical and technological patents and account for 5.3% of all patents granted. By examining the sub-categories under each of these codes, we determined them to be either more traditionally pharmaceutical or predominantly biotechnological. The codes we considered are as shown in table C2.

¹ For a fuller discussion of some of the definitions of biotechnology used today, and contemplated for statistical purposes, see, Brigitte van Beuzekom, "Biotechnology Statistics in OECD Member Countries: An Inventory," STI Working Paper 2004/8, *Statistical Analysis of Science, Technology and Industry*, OECD Directorate for Science, Technology and Industry.

² We have taken Beuzekom's definition and wording as a starting point.

³ See B.H. Hall, A.B. Jaffe, and M. Trajtenberg, "The NBER Patent Citation Data File: Lessons, Insights, and Methodological Tools," National Bureau of Economic Research Working Paper 8498, 2001; and the data at http://emlab.berkeley.edu/users/bhhall/pat/pat63_02f.zip.

We chose to do our own examination and classification of patent codes after concluding that the classification system available in the Hall data does not suit our purposes well. For example, the Hall patent data include a patent sub-category called “Biotechnology.” Unfortunately, this is a very literal definition of the phrase and heavily emphasizes surgical tools and techniques, as well as dentistry, eye examination, and prosthetics.

In the final analysis, it is not possible to produce a perfect distinction between biotechnology and pharmaceuticals at the 3-digit patent code level. However, it is possible to categorize codes based on the preponderance of their sub-codes. We offer one valuable, though necessarily arbitrary approach.

Table C1
Classification of Patent Codes

Patent Code	Description	Our Classification	Count in Database	Count in Focus Countries
424	Drug, Bio-Affecting and Body Treating Compositions	Biotechnological	35,743	28,264
800	Unmodified Parts Thereof and Related Processes	Biotechnological	3,487	3,386
423	Chemistry of Inorganic Compounds	Pharmaceutical	21,988	8,635
435	Chemistry: Molecular Biology and Microbiology	Pharmaceutical	41,350	33,894
436	Chemistry: Analytical and Immunological Testing	Pharmaceutical	8,271	5,374
514	Drug, Bio-Affecting and Body Treating Compositions	Pharmaceutical	70,597	49,089

Appendix D: Country-Level Fixed Capital Stocks

Table D1
Australia - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	68	68	0.0	272	272	0.0	339	339	0.0
1986	27	27	0.0	302	302	0.0	330	330	0.0
1987	91	91	0.0	229	229	0.0	320	320	0.0
1988	39	39	0.0	272	272	0.0	311	311	0.0
1989	96	96	0.0	206	206	0.0	302	302	0.0
1990	155	155	0.0	138	138	0.0	293	293	0.0
1991	118	118	0.0	167	167	0.0	284	284	0.0
1992	100	100	0.0	176	176	0.0	276	276	0.0
1993	87	87	0.0	181	181	0.0	268	268	0.0
1994	66	66	0.0	194	194	0.0	260	260	0.0
1995	74	74	0.0	179	179	0.0	253	253	0.0
1996	69	69	0.0	174	174	0.0	243	243	0.0
1997	44	44	0.0	186	186	0.0	230	230	0.0
1998	46	46	0.0	122	122	0.0	168	168	0.0
1999	84	84	0.0	99	99	0.0	183	183	0.0
2000	83	83	0.0	111	111	0.0	194	194	0.0
2001	73	73	0.0	96	96	0.0	169	169	0.0
2002	86	86	0.0	120	120	0.0	206	206	0.0
2003	84	84	0.0	118	118	0.0	202	202	0.0
2004	83	83	0.0	117	117	0.0	200	200	0.0
2005	83	42	50.0	117	94	20.0	200	135	32.5
2006	84	42	50.0	118	95	20.0	202	137	32.5
2007	86	43	50.0	121	97	20.0	207	139	32.5
2008	89	44	50.0	124	100	20.0	213	144	32.5
2009	92	46	50.0	129	104	20.0	222	150	32.5
2010	97	48	50.0	136	109	20.0	233	157	32.5
2011	103	51	50.0	144	115	20.0	247	167	32.5
2012	110	55	50.0	154	123	20.0	264	178	32.5
2013	117	59	50.0	165	132	20.0	282	190	32.5
2014	125	63	50.0	176	141	20.0	301	203	32.5
2015	134	67	50.0	188	150	20.0	321	217	32.5
2016	143	71	50.0	200	160	20.0	343	231	32.5
2017	152	76	50.0	214	171	20.0	366	247	32.5
2018	162	81	50.0	228	183	20.0	391	264	32.5
2019	173	87	50.0	244	195	20.0	417	282	32.5
2020	185	93	50.0	260	208	20.0	445	301	32.5
2021	198	99	50.0	278	222	20.0	475	321	32.5
2022	211	106	50.0	297	237	20.0	508	343	32.5
2023	225	113	50.0	317	253	20.0	542	366	32.5
2024	241	120	50.0	338	270	20.0	579	391	32.5
2025	257	128	50.0	361	289	20.0	618	417	32.5

Table D2

Australia - Capital Stocks

(All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	407	407	0.0	1,629	1,629	0.0	2,037	2,037	0.0
1985	443	443	0.0	1,771	1,771	0.0	2,213	2,213	0.0
1986	435	435	0.0	1,931	1,931	0.0	2,366	2,366	0.0
1987	491	491	0.0	2,005	2,005	0.0	2,497	2,497	0.0
1988	491	491	0.0	2,117	2,117	0.0	2,608	2,608	0.0
1989	548	548	0.0	2,153	2,153	0.0	2,701	2,701	0.0
1990	659	659	0.0	2,119	2,119	0.0	2,778	2,778	0.0
1991	724	724	0.0	2,116	2,116	0.0	2,840	2,840	0.0
1992	766	766	0.0	2,122	2,122	0.0	2,889	2,889	0.0
1993	792	792	0.0	2,134	2,134	0.0	2,926	2,926	0.0
1994	795	795	0.0	2,157	2,157	0.0	2,952	2,952	0.0
1995	805	805	0.0	2,164	2,164	0.0	2,969	2,969	0.0
1996	810	810	0.0	2,164	2,164	0.0	2,974	2,974	0.0
1997	789	789	0.0	2,177	2,177	0.0	2,966	2,966	0.0
1998	772	772	0.0	2,125	2,125	0.0	2,897	2,897	0.0
1999	794	794	0.0	2,054	2,054	0.0	2,848	2,848	0.0
2000	814	814	0.0	2,001	2,001	0.0	2,815	2,815	0.0
2001	821	821	0.0	1,937	1,937	0.0	2,758	2,758	0.0
2002	841	841	0.0	1,902	1,902	0.0	2,743	2,743	0.0
2003	858	858	0.0	1,867	1,867	0.0	2,725	2,725	0.0
2004	872	872	0.0	1,835	1,835	0.0	2,707	2,707	0.0
2005	886	844	4.7	1,805	1,782	1.3	2,691	2,626	2.4
2006	899	819	8.9	1,779	1,734	2.5	2,678	2,552	4.7
2007	913	796	12.8	1,757	1,691	3.7	2,670	2,488	6.8
2008	929	777	16.3	1,741	1,656	4.9	2,669	2,432	8.9
2009	946	761	19.6	1,731	1,627	6.0	2,678	2,387	10.8
2010	968	748	22.7	1,729	1,605	7.1	2,696	2,354	12.7
2011	993	740	25.5	1,735	1,593	8.2	2,728	2,332	14.5
2012	1,023	735	28.1	1,750	1,588	9.2	2,773	2,324	16.2
2013	1,059	735	30.5	1,775	1,593	10.2	2,833	2,328	17.8
2014	1,099	739	32.8	1,808	1,606	11.2	2,907	2,345	19.3
2015	1,145	747	34.8	1,851	1,628	12.1	2,996	2,374	20.7
2016	1,196	758	36.6	1,903	1,658	12.9	3,099	2,416	22.0
2017	1,252	774	38.2	1,965	1,696	13.7	3,217	2,470	23.2
2018	1,314	793	39.7	2,036	1,743	14.4	3,350	2,536	24.3
2019	1,383	816	41.0	2,117	1,799	15.0	3,500	2,615	25.3
2020	1,457	844	42.1	2,208	1,863	15.6	3,665	2,706	26.2
2021	1,538	875	43.1	2,309	1,936	16.1	3,847	2,811	26.9
2022	1,626	910	44.0	2,421	2,018	16.6	4,047	2,929	27.6
2023	1,722	950	44.8	2,544	2,110	17.0	4,265	3,060	28.2
2024	1,825	995	45.5	2,678	2,212	17.4	4,503	3,206	28.8
2025	1,936	1,043	46.1	2,825	2,323	17.7	4,760	3,367	29.3

Table D3
Austria - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	26	26	0.0	102	102	0.0	128	128	0.0
1986	30	30	0.0	104	104	0.0	134	134	0.0
1987	33	33	0.0	108	108	0.0	141	141	0.0
1988	26	26	0.0	122	122	0.0	148	148	0.0
1989	46	46	0.0	109	109	0.0	155	155	0.0
1990	33	33	0.0	130	130	0.0	163	163	0.0
1991	16	16	0.0	112	112	0.0	128	128	0.0
1992	44	44	0.0	111	111	0.0	155	155	0.0
1993	43	43	0.0	161	161	0.0	204	204	0.0
1994	37	37	0.0	149	149	0.0	186	186	0.0
1995	55	55	0.0	144	144	0.0	200	200	0.0
1996	31	31	0.0	136	136	0.0	167	167	0.0
1997	18	18	0.0	121	121	0.0	140	140	0.0
1998	48	48	0.0	129	129	0.0	176	176	0.0
1999	69	69	0.0	122	122	0.0	191	191	0.0
2000	82	82	0.0	181	181	0.0	263	263	0.0
2001	80	80	0.0	196	196	0.0	276	276	0.0
2002	102	102	0.0	188	188	0.0	290	290	0.0
2003	107	107	0.0	197	197	0.0	304	304	0.0
2004	112	112	0.0	207	207	0.0	319	319	0.0
2005	118	59	50.0	217	174	20.0	335	233	30.5
2006	124	62	50.0	228	183	20.0	352	244	30.5
2007	130	65	50.0	239	192	20.0	369	256	30.5
2008	136	68	50.0	251	201	20.0	387	269	30.5
2009	143	71	50.0	264	211	20.0	406	282	30.5
2010	150	75	50.0	277	221	20.0	426	296	30.5
2011	157	79	50.0	290	232	20.0	447	311	30.5
2012	165	82	50.0	305	244	20.0	469	326	30.5
2013	173	87	50.0	320	256	20.0	493	342	30.5
2014	182	91	50.0	335	268	20.0	517	359	30.5
2015	191	95	50.0	352	281	20.0	542	377	30.5
2016	200	100	50.0	369	295	20.0	569	395	30.5
2017	210	105	50.0	387	310	20.0	597	415	30.5
2018	220	110	50.0	406	325	20.0	627	435	30.5
2019	231	116	50.0	427	341	20.0	658	457	30.5
2020	242	121	50.0	448	358	20.0	690	479	30.5
2021	254	127	50.0	470	376	20.0	724	503	30.5
2022	267	133	50.0	493	394	20.0	760	528	30.5
2023	280	140	50.0	517	414	20.0	797	554	30.5
2024	294	147	50.0	543	434	20.0	836	581	30.5
2025	308	154	50.0	569	455	20.0	878	610	30.5

Table D4
Austria - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	154	154	0.0	614	614	0.0	768	768	0.0
1985	167	167	0.0	668	668	0.0	835	835	0.0
1986	183	183	0.0	719	719	0.0	902	902	0.0
1987	201	201	0.0	770	770	0.0	971	971	0.0
1988	211	211	0.0	830	830	0.0	1,041	1,041	0.0
1989	240	240	0.0	873	873	0.0	1,113	1,113	0.0
1990	254	254	0.0	933	933	0.0	1,187	1,187	0.0
1991	249	249	0.0	970	970	0.0	1,220	1,220	0.0
1992	274	274	0.0	1,003	1,003	0.0	1,277	1,277	0.0
1993	295	295	0.0	1,084	1,084	0.0	1,379	1,379	0.0
1994	308	308	0.0	1,147	1,147	0.0	1,455	1,455	0.0
1995	339	339	0.0	1,199	1,199	0.0	1,539	1,539	0.0
1996	343	343	0.0	1,239	1,239	0.0	1,583	1,583	0.0
1997	334	334	0.0	1,261	1,261	0.0	1,596	1,596	0.0
1998	355	355	0.0	1,289	1,289	0.0	1,645	1,645	0.0
1999	396	396	0.0	1,308	1,308	0.0	1,704	1,704	0.0
2000	447	447	0.0	1,384	1,384	0.0	1,831	1,831	0.0
2001	491	491	0.0	1,470	1,470	0.0	1,961	1,961	0.0
2002	554	554	0.0	1,540	1,540	0.0	2,094	2,094	0.0
2003	617	617	0.0	1,615	1,615	0.0	2,231	2,231	0.0
2004	679	679	0.0	1,693	1,693	0.0	2,372	2,372	0.0
2005	743	684	7.9	1,775	1,731	2.5	2,518	2,415	4.1
2006	807	691	14.4	1,861	1,775	4.6	2,668	2,466	7.6
2007	872	701	19.7	1,951	1,825	6.5	2,824	2,525	10.6
2008	938	713	24.1	2,047	1,880	8.1	2,985	2,592	13.2
2009	1,006	727	27.7	2,146	1,940	9.6	3,152	2,667	15.4
2010	1,075	744	30.8	2,251	2,006	10.9	3,327	2,750	17.3
2011	1,147	763	33.5	2,361	2,078	12.0	3,508	2,841	19.0
2012	1,220	784	35.7	2,477	2,155	13.0	3,697	2,940	20.5
2013	1,295	808	37.6	2,598	2,239	13.8	3,894	3,047	21.8
2014	1,373	834	39.3	2,726	2,328	14.6	4,099	3,162	22.9
2015	1,454	863	40.7	2,860	2,423	15.3	4,314	3,286	23.8
2016	1,538	894	41.9	3,000	2,524	15.9	4,538	3,418	24.7
2017	1,624	927	42.9	3,147	2,632	16.4	4,772	3,560	25.4
2018	1,715	963	43.8	3,302	2,747	16.8	5,017	3,710	26.0
2019	1,809	1,002	44.6	3,464	2,868	17.2	5,273	3,870	26.6
2020	1,906	1,043	45.3	3,635	2,997	17.5	5,541	4,040	27.1
2021	2,008	1,086	45.9	3,814	3,133	17.8	5,822	4,219	27.5
2022	2,114	1,133	46.4	4,001	3,277	18.1	6,116	4,409	27.9
2023	2,225	1,182	46.9	4,198	3,428	18.3	6,424	4,610	28.2
2024	2,341	1,235	47.3	4,405	3,588	18.5	6,746	4,823	28.5
2025	2,462	1,290	47.6	4,622	3,756	18.7	7,084	5,046	28.8

Table D5
Belgium - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	-	-	0.0	80	80	0.0	80	80	0.0
1986	20	20	0.0	68	68	0.0	88	88	0.0
1987	8	8	0.0	113	113	0.0	122	122	0.0
1988	15	15	0.0	131	131	0.0	145	145	0.0
1989	20	20	0.0	137	137	0.0	157	157	0.0
1990	28	28	0.0	185	185	0.0	213	213	0.0
1991	29	29	0.0	175	175	0.0	204	204	0.0
1992	49	49	0.0	224	224	0.0	273	273	0.0
1993	49	49	0.0	178	178	0.0	227	227	0.0
1994	57	57	0.0	239	239	0.0	296	296	0.0
1995	63	63	0.0	325	325	0.0	388	388	0.0
1996	55	55	0.0	330	330	0.0	385	385	0.0
1997	100	100	0.0	305	305	0.0	405	405	0.0
1998	99	99	0.0	255	255	0.0	354	354	0.0
1999	88	88	0.0	218	218	0.0	306	306	0.0
2000	102	102	0.0	235	235	0.0	337	337	0.0
2001	96	96	0.0	272	272	0.0	368	368	0.0
2002	133	133	0.0	265	265	0.0	398	398	0.0
2003	142	142	0.0	284	284	0.0	426	426	0.0
2004	152	152	0.0	303	303	0.0	455	455	0.0
2005	162	81	50.0	324	259	20.0	486	340	30.0
2006	173	86	50.0	346	277	20.0	518	363	30.0
2007	185	92	50.0	369	295	20.0	554	387	30.0
2008	197	98	50.0	394	315	20.0	591	414	30.0
2009	210	105	50.0	421	337	20.0	631	442	30.0
2010	225	112	50.0	449	359	20.0	674	472	30.0
2011	240	120	50.0	479	384	20.0	719	503	30.0
2012	256	128	50.0	512	409	20.0	768	537	30.0
2013	273	137	50.0	546	437	20.0	820	574	30.0
2014	292	146	50.0	583	467	20.0	875	613	30.0
2015	311	156	50.0	623	498	20.0	934	654	30.0
2016	333	166	50.0	665	532	20.0	998	698	30.0
2017	355	177	50.0	710	568	20.0	1,065	745	30.0
2018	379	189	50.0	758	606	20.0	1,137	796	30.0
2019	405	202	50.0	809	647	20.0	1,214	850	30.0
2020	432	216	50.0	864	691	20.0	1,296	907	30.0
2021	461	231	50.0	922	738	20.0	1,384	969	30.0
2022	492	246	50.0	985	788	20.0	1,477	1,034	30.0
2023	526	263	50.0	1,051	841	20.0	1,577	1,104	30.0
2024	561	281	50.0	1,122	898	20.0	1,684	1,179	30.0
2025	599	300	50.0	1,198	959	20.0	1,798	1,258	30.0

Table D6
Belgium - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	-	-	0.0	477	477	0.0	477	477	0.0
1985	-	-	0.0	518	518	0.0	518	518	0.0
1986	20	20	0.0	545	545	0.0	565	565	0.0
1987	27	27	0.0	615	615	0.0	641	641	0.0
1988	39	39	0.0	696	696	0.0	735	735	0.0
1989	56	56	0.0	777	777	0.0	833	833	0.0
1990	80	80	0.0	900	900	0.0	980	980	0.0
1991	103	103	0.0	1,003	1,003	0.0	1,106	1,106	0.0
1992	143	143	0.0	1,147	1,147	0.0	1,290	1,290	0.0
1993	181	181	0.0	1,233	1,233	0.0	1,414	1,414	0.0
1994	224	224	0.0	1,373	1,373	0.0	1,597	1,597	0.0
1995	269	269	0.0	1,588	1,588	0.0	1,857	1,857	0.0
1996	303	303	0.0	1,791	1,791	0.0	2,094	2,094	0.0
1997	378	378	0.0	1,953	1,953	0.0	2,331	2,331	0.0
1998	447	447	0.0	2,052	2,052	0.0	2,499	2,499	0.0
1999	499	499	0.0	2,106	2,106	0.0	2,605	2,605	0.0
2000	561	561	0.0	2,173	2,173	0.0	2,734	2,734	0.0
2001	612	612	0.0	2,271	2,271	0.0	2,883	2,883	0.0
2002	696	696	0.0	2,354	2,354	0.0	3,050	3,050	0.0
2003	782	782	0.0	2,450	2,450	0.0	3,232	3,232	0.0
2004	871	871	0.0	2,557	2,557	0.0	3,429	3,429	0.0
2005	964	883	8.4	2,676	2,612	2.4	3,640	3,494	4.0
2006	1,059	898	15.2	2,808	2,679	4.6	3,867	3,578	7.5
2007	1,159	919	20.7	2,952	2,760	6.5	4,111	3,679	10.5
2008	1,263	944	25.3	3,110	2,854	8.2	4,373	3,798	13.2
2009	1,373	973	29.1	3,282	2,963	9.7	4,655	3,936	15.4
2010	1,487	1,008	32.2	3,468	3,085	11.1	4,956	4,093	17.4
2011	1,608	1,047	34.9	3,670	3,222	12.2	5,278	4,269	19.1
2012	1,735	1,091	37.1	3,889	3,373	13.3	5,624	4,465	20.6
2013	1,870	1,141	39.0	4,124	3,541	14.1	5,994	4,681	21.9
2014	2,012	1,195	40.6	4,378	3,724	14.9	6,389	4,919	23.0
2015	2,162	1,255	41.9	4,650	3,925	15.6	6,813	5,180	24.0
2016	2,322	1,321	43.1	4,943	4,143	16.2	7,265	5,464	24.8
2017	2,491	1,393	44.1	5,258	4,379	16.7	7,749	5,772	25.5
2018	2,671	1,471	44.9	5,595	4,635	17.2	8,266	6,106	26.1
2019	2,862	1,556	45.6	5,957	4,912	17.5	8,819	6,467	26.7
2020	3,065	1,647	46.3	6,344	5,210	17.9	9,409	6,857	27.1
2021	3,281	1,746	46.8	6,759	5,531	18.2	10,040	7,277	27.5
2022	3,511	1,853	47.2	7,203	5,876	18.4	10,714	7,729	27.9
2023	3,756	1,967	47.6	7,678	6,247	18.6	11,434	8,215	28.2
2024	4,016	2,090	48.0	8,186	6,646	18.8	12,203	8,736	28.4
2025	4,294	2,223	48.2	8,730	7,073	19.0	13,024	9,295	28.6

Table D7
Brazil - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	66	66	0.0	383	383	0.0	449	449	0.0
1986	60	60	0.0	327	327	0.0	387	387	0.0
1987	57	57	0.0	277	277	0.0	334	334	0.0
1988	52	52	0.0	236	236	0.0	288	288	0.0
1989	50	50	0.0	198	198	0.0	249	249	0.0
1990	44	44	0.0	171	171	0.0	214	214	0.0
1991	38	38	0.0	145	145	0.0	183	183	0.0
1992	34	34	0.0	125	125	0.0	159	159	0.0
1993	(17)	(17)	0.0	(64)	(64)	0.0	(81)	(81)	0.0
1994	28	28	0.0	91	91	0.0	119	119	0.0
1995	24	24	0.0	80	80	0.0	104	104	0.0
1996	21	21	0.0	70	70	0.0	91	91	0.0
1997	22	22	0.0	59	59	0.0	82	82	0.0
1998	20	20	0.0	54	54	0.0	74	74	0.0
1999	19	19	0.0	48	48	0.0	67	67	0.0
2000	17	17	0.0	45	45	0.0	62	62	0.0
2001	17	17	0.0	41	41	0.0	58	58	0.0
2002	16	16	0.0	39	39	0.0	55	55	0.0
2003	15	15	0.0	37	37	0.0	52	52	0.0
2004	14	14	0.0	36	36	0.0	50	50	0.0
2005	14	7	50.0	35	28	20.0	49	35	28.7
2006	14	7	50.0	34	27	20.0	48	34	28.7
2007	14	7	50.0	34	27	20.0	47	34	28.7
2008	14	7	50.0	34	27	20.0	48	34	28.7
2009	14	7	50.0	34	27	20.0	48	34	28.7
2010	14	7	50.0	35	28	20.0	49	35	28.7
2011	15	7	50.0	36	29	20.0	51	36	28.7
2012	15	8	50.0	38	30	20.0	53	38	28.7
2013	16	8	50.0	40	32	20.0	56	40	28.7
2014	17	9	50.0	42	34	20.0	59	42	28.7
2015	18	9	50.0	45	36	20.0	63	45	28.7
2016	20	10	50.0	48	38	20.0	68	48	28.7
2017	21	10	50.0	51	41	20.0	72	52	28.7
2018	22	11	50.0	55	44	20.0	77	55	28.7
2019	24	12	50.0	59	47	20.0	82	59	28.7
2020	25	13	50.0	63	50	20.0	88	63	28.7
2021	27	14	50.0	67	53	20.0	94	67	28.7
2022	29	14	50.0	71	57	20.0	100	71	28.7
2023	31	15	50.0	76	61	20.0	107	76	28.7
2024	33	16	50.0	81	65	20.0	114	81	28.7
2025	35	18	50.0	87	69	20.0	122	87	28.7

Table D8
Brazil - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	396	396	0.0	2,297	2,297	0.0	2,694	2,694	0.0
1985	431	431	0.0	2,496	2,496	0.0	2,927	2,927	0.0
1986	457	457	0.0	2,624	2,624	0.0	3,080	3,080	0.0
1987	477	477	0.0	2,691	2,691	0.0	3,168	3,168	0.0
1988	491	491	0.0	2,712	2,712	0.0	3,203	3,203	0.0
1989	502	502	0.0	2,693	2,693	0.0	3,195	3,195	0.0
1990	505	505	0.0	2,648	2,648	0.0	3,154	3,154	0.0
1991	503	503	0.0	2,581	2,581	0.0	3,084	3,084	0.0
1992	496	496	0.0	2,500	2,500	0.0	2,996	2,996	0.0
1993	440	440	0.0	2,236	2,236	0.0	2,675	2,675	0.0
1994	433	433	0.0	2,147	2,147	0.0	2,580	2,580	0.0
1995	422	422	0.0	2,055	2,055	0.0	2,477	2,477	0.0
1996	410	410	0.0	1,961	1,961	0.0	2,371	2,371	0.0
1997	399	399	0.0	1,864	1,864	0.0	2,263	2,263	0.0
1998	387	387	0.0	1,768	1,768	0.0	2,155	2,155	0.0
1999	375	375	0.0	1,675	1,675	0.0	2,050	2,050	0.0
2000	363	363	0.0	1,586	1,586	0.0	1,948	1,948	0.0
2001	350	350	0.0	1,500	1,500	0.0	1,850	1,850	0.0
2002	338	338	0.0	1,419	1,419	0.0	1,757	1,757	0.0
2003	326	326	0.0	1,342	1,342	0.0	1,668	1,668	0.0
2004	314	314	0.0	1,270	1,270	0.0	1,585	1,585	0.0
2005	303	296	2.3	1,203	1,196	0.6	1,507	1,493	0.9
2006	293	279	4.6	1,141	1,128	1.2	1,434	1,407	1.8
2007	283	264	6.8	1,084	1,065	1.7	1,367	1,329	2.8
2008	274	250	8.9	1,031	1,007	2.3	1,305	1,256	3.7
2009	266	237	11.1	983	953	3.0	1,249	1,190	4.7
2010	259	225	13.2	939	905	3.6	1,198	1,130	5.7
2011	253	214	15.3	900	862	4.3	1,153	1,076	6.7
2012	248	205	17.5	866	823	4.9	1,114	1,028	7.7
2013	244	196	19.6	836	789	5.7	1,081	985	8.8
2014	242	189	21.8	812	760	6.4	1,053	949	9.9
2015	241	183	23.9	792	735	7.2	1,032	918	11.1
2016	241	178	26.0	776	715	8.0	1,017	893	12.2
2017	243	174	28.1	766	699	8.8	1,008	873	13.4
2018	245	172	30.1	759	686	9.6	1,005	858	14.6
2019	249	170	32.0	757	678	10.4	1,007	848	15.7
2020	255	169	33.8	759	674	11.2	1,014	843	16.9
2021	262	169	35.4	765	674	12.0	1,027	842	17.9
2022	270	170	37.0	775	677	12.7	1,045	846	19.0
2023	279	172	38.4	789	683	13.4	1,068	855	19.9
2024	289	174	39.8	807	694	14.1	1,097	868	20.8
2025	301	178	41.0	829	708	14.7	1,131	886	21.7

Table D9
Canada - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	11	11	0.0	69	69	0.0	80	80	0.0
1986	19	19	0.0	82	82	0.0	101	101	0.0
1987	20	20	0.0	118	118	0.0	139	139	0.0
1988	14	14	0.0	122	122	0.0	136	136	0.0
1989	42	42	0.0	147	147	0.0	189	189	0.0
1990	52	52	0.0	202	202	0.0	255	255	0.0
1991	31	31	0.0	187	187	0.0	218	218	0.0
1992	48	48	0.0	173	173	0.0	221	221	0.0
1993	45	45	0.0	183	183	0.0	228	228	0.0
1994	47	47	0.0	161	161	0.0	207	207	0.0
1995	57	57	0.0	125	125	0.0	182	182	0.0
1996	60	60	0.0	180	180	0.0	240	240	0.0
1997	61	61	0.0	144	144	0.0	205	205	0.0
1998	71	71	0.0	166	166	0.0	237	237	0.0
1999	68	68	0.0	163	163	0.0	231	231	0.0
2000	63	63	0.0	204	204	0.0	268	268	0.0
2001	87	87	0.0	218	218	0.0	305	305	0.0
2002	89	89	0.0	202	202	0.0	291	291	0.0
2003	133	133	0.0	302	302	0.0	435	435	0.0
2004	146	146	0.0	332	332	0.0	478	478	0.0
2005	159	79	50.0	362	289	20.0	521	369	29.2
2006	171	86	50.0	390	312	20.0	562	398	29.2
2007	183	92	50.0	417	334	20.0	600	425	29.2
2008	196	98	50.0	445	356	20.0	641	454	29.2
2009	209	104	50.0	475	380	20.0	684	485	29.2
2010	223	112	50.0	508	406	20.0	731	518	29.2
2011	238	119	50.0	542	433	20.0	780	553	29.2
2012	254	127	50.0	579	463	20.0	833	590	29.2
2013	271	136	50.0	618	494	20.0	889	630	29.2
2014	290	145	50.0	659	528	20.0	949	672	29.2
2015	309	155	50.0	704	563	20.0	1,013	718	29.2
2016	330	165	50.0	752	601	20.0	1,082	766	29.2
2017	353	176	50.0	802	642	20.0	1,155	818	29.2
2018	376	188	50.0	857	685	20.0	1,233	874	29.2
2019	402	201	50.0	915	732	20.0	1,316	933	29.2
2020	429	215	50.0	976	781	20.0	1,406	996	29.2
2021	458	229	50.0	1,043	834	20.0	1,501	1,063	29.2
2022	489	245	50.0	1,113	890	20.0	1,602	1,135	29.2
2023	522	261	50.0	1,188	951	20.0	1,710	1,212	29.2
2024	557	279	50.0	1,269	1,015	20.0	1,826	1,294	29.2
2025	595	298	50.0	1,354	1,084	20.0	1,950	1,381	29.2

Table D10
Canada - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	67	67	0.0	412	412	0.0	479	479	0.0
1985	73	73	0.0	448	448	0.0	521	521	0.0
1986	86	86	0.0	494	494	0.0	580	580	0.0
1987	100	100	0.0	573	573	0.0	673	673	0.0
1988	106	106	0.0	649	649	0.0	754	754	0.0
1989	139	139	0.0	744	744	0.0	883	883	0.0
1990	181	181	0.0	887	887	0.0	1,067	1,067	0.0
1991	197	197	0.0	1,003	1,003	0.0	1,200	1,200	0.0
1992	229	229	0.0	1,095	1,095	0.0	1,324	1,324	0.0
1993	256	256	0.0	1,190	1,190	0.0	1,447	1,447	0.0
1994	283	283	0.0	1,256	1,256	0.0	1,538	1,538	0.0
1995	317	317	0.0	1,281	1,281	0.0	1,598	1,598	0.0
1996	352	352	0.0	1,358	1,358	0.0	1,710	1,710	0.0
1997	384	384	0.0	1,393	1,393	0.0	1,778	1,778	0.0
1998	424	424	0.0	1,448	1,448	0.0	1,872	1,872	0.0
1999	458	458	0.0	1,495	1,495	0.0	1,953	1,953	0.0
2000	485	485	0.0	1,580	1,580	0.0	2,065	2,065	0.0
2001	533	533	0.0	1,671	1,671	0.0	2,205	2,205	0.0
2002	579	579	0.0	1,740	1,740	0.0	2,319	2,319	0.0
2003	666	666	0.0	1,903	1,903	0.0	2,569	2,569	0.0
2004	759	759	0.0	2,083	2,083	0.0	2,841	2,841	0.0
2005	857	777	9.3	2,278	2,206	3.2	3,135	2,983	4.8
2006	960	801	16.6	2,486	2,341	5.8	3,446	3,142	8.8
2007	1,066	829	22.3	2,704	2,488	8.0	3,770	3,316	12.0
2008	1,177	860	26.9	2,933	2,645	9.8	4,110	3,505	14.7
2009	1,291	896	30.6	3,174	2,814	11.3	4,465	3,709	16.9
2010	1,411	936	33.7	3,427	2,995	12.6	4,839	3,930	18.8
2011	1,536	980	36.2	3,695	3,188	13.7	5,231	4,168	20.3
2012	1,668	1,028	38.3	3,978	3,396	14.6	5,646	4,425	21.6
2013	1,806	1,082	40.1	4,277	3,619	15.4	6,083	4,700	22.7
2014	1,951	1,140	41.6	4,595	3,857	16.1	6,545	4,997	23.7
2015	2,104	1,204	42.8	4,931	4,111	16.6	7,035	5,315	24.5
2016	2,266	1,272	43.8	5,288	4,384	17.1	7,554	5,656	25.1
2017	2,437	1,347	44.7	5,668	4,675	17.5	8,105	6,022	25.7
2018	2,619	1,427	45.5	6,071	4,986	17.9	8,690	6,414	26.2
2019	2,811	1,514	46.1	6,500	5,319	18.2	9,311	6,833	26.6
2020	3,015	1,608	46.7	6,956	5,675	18.4	9,972	7,282	27.0
2021	3,232	1,708	47.2	7,442	6,055	18.6	10,674	7,763	27.3
2022	3,463	1,816	47.6	7,960	6,461	18.8	11,422	8,277	27.5
2023	3,708	1,932	47.9	8,511	6,895	19.0	12,219	8,826	27.8
2024	3,969	2,056	48.2	9,099	7,358	19.1	13,068	9,414	28.0
2025	4,246	2,189	48.4	9,726	7,853	19.3	13,972	10,042	28.1

Table D11
China - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	0	0	0.0	0	0	0.0	0	0	0.0
1986	0	0	0.0	1	1	0.0	1	1	0.0
1987	0	0	0.0	1	1	0.0	1	1	0.0
1988	0	0	0.0	1	1	0.0	1	1	0.0
1989	0	0	0.0	1	1	0.0	1	1	0.0
1990	0	0	0.0	1	1	0.0	2	2	0.0
1991	1	1	0.0	2	2	0.0	2	2	0.0
1992	1	1	0.0	3	3	0.0	3	3	0.0
1993	1	1	0.0	4	4	0.0	5	5	0.0
1994	1	1	0.0	2	2	0.0	2	2	0.0
1995	1	1	0.0	3	3	0.0	3	3	0.0
1996	2	2	0.0	8	8	0.0	10	10	0.0
1997	1	1	0.0	2	2	0.0	3	3	0.0
1998	2	2	0.0	5	5	0.0	7	7	0.0
1999	3	3	0.0	7	7	0.0	10	10	0.0
2000	8	8	0.0	20	20	0.0	28	28	0.0
2001	10	10	0.0	26	26	0.0	36	36	0.0
2002	14	14	0.0	34	34	0.0	47	47	0.0
2003	18	18	0.0	44	44	0.0	61	61	0.0
2004	23	23	0.0	56	56	0.0	78	78	0.0
2005	29	14	50.0	71	57	20.0	99	71	28.7
2006	36	18	50.0	89	71	20.0	125	89	28.7
2007	45	23	50.0	111	89	20.0	157	112	28.7
2008	56	28	50.0	138	111	20.0	194	139	28.7
2009	69	34	50.0	170	136	20.0	239	171	28.7
2010	84	42	50.0	208	166	20.0	292	208	28.7
2011	102	51	50.0	251	201	20.0	353	252	28.7
2012	122	61	50.0	301	241	20.0	424	302	28.7
2013	145	73	50.0	359	287	20.0	504	360	28.7
2014	172	86	50.0	423	339	20.0	595	425	28.7
2015	201	100	50.0	495	396	20.0	696	497	28.7
2016	233	117	50.0	575	460	20.0	808	576	28.7
2017	268	134	50.0	661	529	20.0	929	663	28.7
2018	306	153	50.0	754	603	20.0	1,059	756	28.7
2019	345	173	50.0	852	682	20.0	1,197	854	28.7
2020	387	193	50.0	954	763	20.0	1,341	957	28.7
2021	430	215	50.0	1,059	848	20.0	1,489	1,062	28.7
2022	473	236	50.0	1,166	932	20.0	1,638	1,169	28.7
2023	515	258	50.0	1,271	1,017	20.0	1,786	1,274	28.7
2024	557	278	50.0	1,373	1,098	20.0	1,929	1,376	28.7
2025	596	298	50.0	1,469	1,175	20.0	2,065	1,473	28.7

Table D12
China - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	0	0	0.0	2	2	0.0	3	3	0.0
1985	0	0	0.0	3	3	0.0	3	3	0.0
1986	1	1	0.0	3	3	0.0	4	4	0.0
1987	1	1	0.0	3	3	0.0	4	4	0.0
1988	1	1	0.0	4	4	0.0	5	5	0.0
1989	1	1	0.0	5	5	0.0	6	6	0.0
1990	1	1	0.0	6	6	0.0	7	7	0.0
1991	2	2	0.0	7	7	0.0	9	9	0.0
1992	2	2	0.0	9	9	0.0	12	12	0.0
1993	3	3	0.0	13	13	0.0	16	16	0.0
1994	3	3	0.0	13	13	0.0	17	17	0.0
1995	4	4	0.0	15	15	0.0	19	19	0.0
1996	6	6	0.0	21	21	0.0	27	27	0.0
1997	6	6	0.0	22	22	0.0	29	29	0.0
1998	8	8	0.0	26	26	0.0	33	33	0.0
1999	10	10	0.0	31	31	0.0	41	41	0.0
2000	17	17	0.0	48	48	0.0	65	65	0.0
2001	26	26	0.0	70	70	0.0	96	96	0.0
2002	38	38	0.0	98	98	0.0	136	136	0.0
2003	52	52	0.0	134	134	0.0	186	186	0.0
2004	71	71	0.0	179	179	0.0	250	250	0.0
2005	94	79	15.3	235	221	6.0	329	301	8.7
2006	122	91	25.6	306	275	10.1	428	366	14.5
2007	158	106	32.6	393	342	12.9	551	449	18.5
2008	201	126	37.4	500	425	14.9	701	551	21.3
2009	254	150	40.8	630	527	16.3	884	678	23.3
2010	318	180	43.3	787	651	17.2	1,105	832	24.7
2011	394	217	45.0	975	800	18.0	1,369	1,017	25.7
2012	485	261	46.3	1,198	977	18.5	1,683	1,238	26.5
2013	592	313	47.2	1,461	1,186	18.8	2,053	1,498	27.0
2014	716	373	47.9	1,768	1,430	19.1	2,484	1,803	27.4
2015	860	444	48.4	2,122	1,712	19.3	2,981	2,156	27.7
2016	1,024	525	48.7	2,527	2,035	19.5	3,551	2,560	27.9
2017	1,210	617	49.0	2,986	2,401	19.6	4,196	3,018	28.1
2018	1,419	721	49.2	3,501	2,812	19.7	4,920	3,532	28.2
2019	1,651	836	49.4	4,072	3,268	19.7	5,723	4,104	28.3
2020	1,906	962	49.5	4,701	3,770	19.8	6,607	4,732	28.4
2021	2,183	1,100	49.6	5,384	4,316	19.8	7,567	5,416	28.4
2022	2,481	1,248	49.7	6,119	4,903	19.9	8,600	6,152	28.5
2023	2,798	1,406	49.7	6,900	5,528	19.9	9,698	6,934	28.5
2024	3,131	1,572	49.8	7,721	6,184	19.9	10,852	7,756	28.5
2025	3,476	1,744	49.8	8,572	6,864	19.9	12,048	8,608	28.6

Table D13
Colombia - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	2	2	0.0	9	9	0.0	10	10	0.0
1986	2	2	0.0	9	9	0.0	11	11	0.0
1987	2	2	0.0	9	9	0.0	11	11	0.0
1988	2	2	0.0	9	9	0.0	11	11	0.0
1989	3	3	0.0	10	10	0.0	13	13	0.0
1990	3	3	0.0	12	12	0.0	14	14	0.0
1991	3	3	0.0	13	13	0.0	17	17	0.0
1992	4	4	0.0	16	16	0.0	21	21	0.0
1993	5	5	0.0	20	20	0.0	25	25	0.0
1994	7	7	0.0	22	22	0.0	29	29	0.0
1995	9	9	0.0	30	30	0.0	39	39	0.0
1996	2	2	0.0	7	7	0.0	9	9	0.0
1997	4	4	0.0	10	10	0.0	14	14	0.0
1998	2	2	0.0	6	6	0.0	8	8	0.0
1999	2	2	0.0	5	5	0.0	7	7	0.0
2000	(3)	(3)	0.0	(7)	(7)	0.0	(9)	(9)	0.0
2001	4	4	0.0	11	11	0.0	15	15	0.0
2002	4	4	0.0	11	11	0.0	15	15	0.0
2003	5	5	0.0	11	11	0.0	16	16	0.0
2004	5	5	0.0	12	12	0.0	17	17	0.0
2005	5	3	50.0	13	10	20.0	18	13	28.7
2006	6	3	50.0	14	11	20.0	19	14	28.7
2007	6	3	50.0	15	12	20.0	20	15	28.7
2008	6	3	50.0	16	12	20.0	22	16	28.7
2009	7	3	50.0	17	13	20.0	23	17	28.7
2010	7	4	50.0	18	14	20.0	25	18	28.7
2011	8	4	50.0	19	15	20.0	27	19	28.7
2012	8	4	50.0	20	16	20.0	28	20	28.7
2013	9	4	50.0	22	17	20.0	30	22	28.7
2014	9	5	50.0	23	18	20.0	32	23	28.7
2015	10	5	50.0	25	20	20.0	35	25	28.7
2016	11	5	50.0	26	21	20.0	37	26	28.7
2017	11	6	50.0	28	22	20.0	39	28	28.7
2018	12	6	50.0	30	24	20.0	42	30	28.7
2019	13	6	50.0	32	26	20.0	45	32	28.7
2020	14	7	50.0	34	27	20.0	48	34	28.7
2021	15	7	50.0	36	29	20.0	51	36	28.7
2022	16	8	50.0	39	31	20.0	55	39	28.7
2023	17	8	50.0	41	33	20.0	58	42	28.7
2024	18	9	50.0	44	35	20.0	62	44	28.7
2025	19	10	50.0	47	38	20.0	66	47	28.7

Table D14
Colombia - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	9	9	0.0	53	53	0.0	62	62	0.0
1985	10	10	0.0	58	58	0.0	68	68	0.0
1986	11	11	0.0	62	62	0.0	73	73	0.0
1987	12	12	0.0	66	66	0.0	78	78	0.0
1988	13	13	0.0	70	70	0.0	83	83	0.0
1989	14	14	0.0	74	74	0.0	89	89	0.0
1990	16	16	0.0	80	80	0.0	96	96	0.0
1991	18	18	0.0	87	87	0.0	105	105	0.0
1992	21	21	0.0	96	96	0.0	117	117	0.0
1993	25	25	0.0	108	108	0.0	133	133	0.0
1994	30	30	0.0	122	122	0.0	151	151	0.0
1995	36	36	0.0	142	142	0.0	178	178	0.0
1996	35	35	0.0	138	138	0.0	173	173	0.0
1997	36	36	0.0	137	137	0.0	173	173	0.0
1998	36	36	0.0	132	132	0.0	167	167	0.0
1999	35	35	0.0	126	126	0.0	161	161	0.0
2000	29	29	0.0	109	109	0.0	139	139	0.0
2001	31	31	0.0	111	111	0.0	143	143	0.0
2002	33	33	0.0	113	113	0.0	147	147	0.0
2003	35	35	0.0	116	116	0.0	151	151	0.0
2004	37	37	0.0	118	118	0.0	156	156	0.0
2005	40	37	6.6	122	119	2.1	161	156	3.2
2006	42	37	12.3	126	121	4.0	168	157	6.1
2007	44	37	17.3	130	123	5.8	175	159	8.7
2008	47	37	21.7	135	125	7.5	182	162	11.1
2009	50	37	25.5	141	128	8.9	191	166	13.3
2010	53	38	28.8	147	132	10.3	201	170	15.2
2011	57	39	31.6	155	137	11.5	211	176	16.9
2012	60	40	34.1	162	142	12.5	223	182	18.4
2013	64	41	36.3	171	148	13.5	235	189	19.7
2014	68	42	38.2	180	155	14.3	249	197	20.9
2015	73	44	39.8	190	162	15.0	263	206	21.9
2016	78	46	41.2	201	170	15.7	279	216	22.8
2017	83	48	42.4	213	179	16.2	296	226	23.6
2018	88	50	43.4	226	188	16.7	315	238	24.2
2019	94	52	44.3	240	199	17.2	334	251	24.8
2020	101	55	45.1	255	210	17.6	355	265	25.3
2021	107	58	45.8	271	222	17.9	378	281	25.8
2022	114	61	46.4	288	236	18.2	402	297	26.2
2023	122	65	46.9	306	250	18.4	429	315	26.5
2024	130	69	47.3	326	265	18.6	457	334	26.8
2025	139	73	47.7	347	282	18.8	486	355	27.1

Table D15
Denmark - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	9	9	0.0	55	55	0.0	64	64	0.0
1986	15	15	0.0	82	82	0.0	97	97	0.0
1987	17	17	0.0	83	83	0.0	100	100	0.0
1988	18	18	0.0	83	83	0.0	102	102	0.0
1989	24	24	0.0	93	93	0.0	117	117	0.0
1990	33	33	0.0	128	128	0.0	161	161	0.0
1991	37	37	0.0	140	140	0.0	177	177	0.0
1992	50	50	0.0	186	186	0.0	235	235	0.0
1993	51	51	0.0	194	194	0.0	244	244	0.0
1994	49	49	0.0	159	159	0.0	208	208	0.0
1995	42	42	0.0	142	142	0.0	185	185	0.0
1996	68	68	0.0	222	222	0.0	290	290	0.0
1997	61	61	0.0	164	164	0.0	226	226	0.0
1998	77	77	0.0	209	209	0.0	286	286	0.0
1999	64	64	0.0	159	159	0.0	222	222	0.0
2000	92	92	0.0	236	236	0.0	328	328	0.0
2001	105	105	0.0	260	260	0.0	366	366	0.0
2002	117	117	0.0	287	287	0.0	404	404	0.0
2003	128	128	0.0	315	315	0.0	442	442	0.0
2004	138	138	0.0	341	341	0.0	480	480	0.0
2005	149	74	50.0	367	294	20.0	516	368	28.7
2006	159	79	50.0	392	313	20.0	551	393	28.7
2007	170	85	50.0	418	335	20.0	588	419	28.7
2008	181	91	50.0	447	357	20.0	628	448	28.7
2009	193	97	50.0	477	381	20.0	670	478	28.7
2010	206	103	50.0	509	407	20.0	715	510	28.7
2011	220	110	50.0	543	435	20.0	764	545	28.7
2012	235	118	50.0	580	464	20.0	815	582	28.7
2013	251	126	50.0	619	495	20.0	870	621	28.7
2014	268	134	50.0	661	529	20.0	929	663	28.7
2015	286	143	50.0	706	565	20.0	992	708	28.7
2016	306	153	50.0	754	603	20.0	1,059	756	28.7
2017	326	163	50.0	805	644	20.0	1,131	807	28.7
2018	348	174	50.0	859	687	20.0	1,207	861	28.7
2019	372	186	50.0	917	734	20.0	1,289	920	28.7
2020	397	199	50.0	979	783	20.0	1,376	982	28.7
2021	424	212	50.0	1,045	836	20.0	1,469	1,048	28.7
2022	453	226	50.0	1,116	893	20.0	1,569	1,119	28.7
2023	483	242	50.0	1,192	953	20.0	1,675	1,195	28.7
2024	516	258	50.0	1,272	1,018	20.0	1,788	1,276	28.7
2025	551	275	50.0	1,358	1,086	20.0	1,909	1,362	28.7

Table D16
Denmark - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	57	57	0.0	328	328	0.0	385	385	0.0
1985	62	62	0.0	357	357	0.0	418	418	0.0
1986	72	72	0.0	410	410	0.0	482	482	0.0
1987	83	83	0.0	460	460	0.0	543	543	0.0
1988	95	95	0.0	507	507	0.0	601	601	0.0
1989	111	111	0.0	559	559	0.0	670	670	0.0
1990	135	135	0.0	643	643	0.0	777	777	0.0
1991	161	161	0.0	731	731	0.0	892	892	0.0
1992	198	198	0.0	858	858	0.0	1,056	1,056	0.0
1993	232	232	0.0	983	983	0.0	1,216	1,216	0.0
1994	263	263	0.0	1,063	1,063	0.0	1,326	1,326	0.0
1995	284	284	0.0	1,121	1,121	0.0	1,405	1,405	0.0
1996	330	330	0.0	1,253	1,253	0.0	1,583	1,583	0.0
1997	364	364	0.0	1,317	1,317	0.0	1,682	1,682	0.0
1998	413	413	0.0	1,421	1,421	0.0	1,834	1,834	0.0
1999	444	444	0.0	1,466	1,466	0.0	1,909	1,909	0.0
2000	500	500	0.0	1,585	1,585	0.0	2,084	2,084	0.0
2001	565	565	0.0	1,718	1,718	0.0	2,283	2,283	0.0
2002	636	636	0.0	1,868	1,868	0.0	2,504	2,504	0.0
2003	713	713	0.0	2,034	2,034	0.0	2,746	2,746	0.0
2004	794	794	0.0	2,212	2,212	0.0	3,006	3,006	0.0
2005	879	805	8.5	2,402	2,329	3.1	3,282	3,134	4.5
2006	968	820	15.3	2,602	2,456	5.6	3,570	3,276	8.2
2007	1,060	839	20.8	2,812	2,594	7.7	3,872	3,433	11.3
2008	1,156	863	25.4	3,033	2,744	9.6	4,190	3,606	13.9
2009	1,257	890	29.2	3,267	2,905	11.1	4,525	3,796	16.1
2010	1,363	922	32.3	3,515	3,080	12.4	4,878	4,002	17.9
2011	1,474	959	35.0	3,777	3,268	13.5	5,251	4,227	19.5
2012	1,592	1,000	37.2	4,055	3,471	14.4	5,647	4,471	20.8
2013	1,715	1,045	39.1	4,350	3,689	15.2	6,065	4,734	21.9
2014	1,846	1,096	40.7	4,663	3,923	15.9	6,509	5,018	22.9
2015	1,985	1,151	42.0	4,996	4,174	16.5	6,981	5,325	23.7
2016	2,132	1,212	43.2	5,350	4,443	17.0	7,482	5,654	24.4
2017	2,287	1,278	44.1	5,727	4,731	17.4	8,014	6,009	25.0
2018	2,453	1,350	45.0	6,127	5,040	17.8	8,580	6,390	25.5
2019	2,628	1,428	45.7	6,554	5,370	18.1	9,183	6,798	26.0
2020	2,815	1,512	46.3	7,009	5,724	18.3	9,824	7,236	26.3
2021	3,014	1,603	46.8	7,494	6,102	18.6	10,508	7,705	26.7
2022	3,225	1,701	47.3	8,010	6,507	18.8	11,236	8,208	26.9
2023	3,451	1,807	47.6	8,561	6,940	18.9	12,012	8,746	27.2
2024	3,690	1,920	48.0	9,148	7,402	19.1	12,839	9,322	27.4
2025	3,946	2,042	48.3	9,774	7,896	19.2	13,720	9,938	27.6

Table D17
Finland - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	2	2	0.0	14	14	0.0	17	17	0.0
1986	3	3	0.0	15	15	0.0	18	18	0.0
1987	3	3	0.0	16	16	0.0	19	19	0.0
1988	4	4	0.0	16	16	0.0	20	20	0.0
1989	9	9	0.0	37	37	0.0	47	47	0.0
1990	16	16	0.0	61	61	0.0	77	77	0.0
1991	10	10	0.0	36	36	0.0	46	46	0.0
1992	9	9	0.0	32	32	0.0	41	41	0.0
1993	5	5	0.0	17	17	0.0	22	22	0.0
1994	8	8	0.0	26	26	0.0	34	34	0.0
1995	11	11	0.0	37	37	0.0	48	48	0.0
1996	9	9	0.0	28	28	0.0	36	36	0.0
1997	11	11	0.0	30	30	0.0	41	41	0.0
1998	9	9	0.0	25	25	0.0	34	34	0.0
1999	10	10	0.0	26	26	0.0	36	36	0.0
2000	11	11	0.0	28	28	0.0	38	38	0.0
2001	12	12	0.0	29	29	0.0	41	41	0.0
2002	12	12	0.0	31	31	0.0	43	43	0.0
2003	13	13	0.0	32	32	0.0	45	45	0.0
2004	14	14	0.0	34	34	0.0	48	48	0.0
2005	15	7	50.0	36	29	20.0	51	36	28.7
2006	15	8	50.0	38	30	20.0	53	38	28.7
2007	16	8	50.0	40	32	20.0	56	40	28.7
2008	17	9	50.0	42	34	20.0	60	43	28.7
2009	18	9	50.0	45	36	20.0	63	45	28.7
2010	19	10	50.0	47	38	20.0	67	47	28.7
2011	20	10	50.0	50	40	20.0	70	50	28.7
2012	21	11	50.0	53	42	20.0	74	53	28.7
2013	23	11	50.0	56	45	20.0	78	56	28.7
2014	24	12	50.0	59	47	20.0	83	59	28.7
2015	25	13	50.0	62	50	20.0	88	62	28.7
2016	27	13	50.0	66	53	20.0	92	66	28.7
2017	28	14	50.0	70	56	20.0	98	70	28.7
2018	30	15	50.0	73	59	20.0	103	74	28.7
2019	31	16	50.0	78	62	20.0	109	78	28.7
2020	33	17	50.0	82	66	20.0	115	82	28.7
2021	35	18	50.0	87	69	20.0	122	87	28.7
2022	37	19	50.0	91	73	20.0	129	92	28.7
2023	39	20	50.0	97	77	20.0	136	97	28.7
2024	41	21	50.0	102	82	20.0	144	102	28.7
2025	44	22	50.0	108	86	20.0	152	108	28.7

Table D18
Finland - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	15	15	0.0	86	86	0.0	101	101	0.0
1985	16	16	0.0	94	94	0.0	110	110	0.0
1986	18	18	0.0	101	101	0.0	119	119	0.0
1987	19	19	0.0	109	109	0.0	128	128	0.0
1988	21	21	0.0	116	116	0.0	138	138	0.0
1989	29	29	0.0	145	145	0.0	174	174	0.0
1990	43	43	0.0	194	194	0.0	237	237	0.0
1991	49	49	0.0	215	215	0.0	263	263	0.0
1992	53	53	0.0	229	229	0.0	283	283	0.0
1993	54	54	0.0	229	229	0.0	282	282	0.0
1994	57	57	0.0	236	236	0.0	294	294	0.0
1995	64	64	0.0	254	254	0.0	318	318	0.0
1996	67	67	0.0	262	262	0.0	329	329	0.0
1997	73	73	0.0	271	271	0.0	344	344	0.0
1998	76	76	0.0	274	274	0.0	350	350	0.0
1999	81	81	0.0	278	278	0.0	359	359	0.0
2000	85	85	0.0	283	283	0.0	368	368	0.0
2001	90	90	0.0	290	290	0.0	379	379	0.0
2002	95	95	0.0	297	297	0.0	392	392	0.0
2003	100	100	0.0	305	305	0.0	406	406	0.0
2004	106	106	0.0	315	315	0.0	421	421	0.0
2005	112	105	6.5	326	319	2.2	438	424	3.3
2006	119	104	12.1	338	323	4.2	456	428	6.3
2007	126	104	17.0	351	330	6.0	476	434	8.9
2008	133	104	21.3	365	337	7.6	498	442	11.3
2009	140	105	25.0	381	346	9.1	521	451	13.4
2010	148	106	28.3	398	356	10.4	546	463	15.2
2011	157	108	31.1	416	368	11.5	572	476	16.9
2012	166	110	33.5	435	381	12.6	601	491	18.3
2013	175	113	35.7	456	395	13.5	631	507	19.6
2014	185	115	37.5	479	410	14.3	664	526	20.8
2015	195	119	39.1	503	427	15.0	698	546	21.7
2016	206	123	40.5	528	446	15.6	735	569	22.6
2017	218	127	41.8	556	466	16.2	774	593	23.4
2018	230	132	42.8	585	487	16.6	815	619	24.0
2019	243	137	43.8	615	510	17.1	859	647	24.6
2020	257	143	44.6	648	535	17.4	905	678	25.1
2021	272	149	45.3	683	562	17.8	955	710	25.6
2022	287	155	45.9	720	590	18.0	1,007	745	26.0
2023	303	163	46.4	759	620	18.3	1,062	782	26.3
2024	320	170	46.9	800	652	18.5	1,121	822	26.6
2025	339	178	47.3	844	686	18.7	1,183	865	26.9

Table D19
France - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	135	135	0.0	796	796	0.0	932	932	0.0
1986	132	132	0.0	799	799	0.0	932	932	0.0
1987	171	171	0.0	760	760	0.0	931	931	0.0
1988	209	209	0.0	723	723	0.0	931	931	0.0
1989	221	221	0.0	710	710	0.0	931	931	0.0
1990	181	181	0.0	750	750	0.0	931	931	0.0
1991	158	158	0.0	675	675	0.0	833	833	0.0
1992	235	235	0.0	830	830	0.0	1,065	1,065	0.0
1993	211	211	0.0	882	882	0.0	1,093	1,093	0.0
1994	183	183	0.0	731	731	0.0	914	914	0.0
1995	214	214	0.0	772	772	0.0	986	986	0.0
1996	352	352	0.0	772	772	0.0	1,124	1,124	0.0
1997	417	417	0.0	704	704	0.0	1,121	1,121	0.0
1998	465	465	0.0	713	713	0.0	1,178	1,178	0.0
1999	499	499	0.0	608	608	0.0	1,107	1,107	0.0
2000	382	382	0.0	547	547	0.0	929	929	0.0
2001	432	432	0.0	497	497	0.0	929	929	0.0
2002	382	382	0.0	547	547	0.0	929	929	0.0
2003	382	382	0.0	547	547	0.0	929	929	0.0
2004	382	382	0.0	547	547	0.0	929	929	0.0
2005	381	191	50.0	547	438	20.0	929	628	32.3
2006	381	191	50.0	547	438	20.0	928	628	32.3
2007	381	191	50.0	547	438	20.0	928	628	32.3
2008	381	191	50.0	547	437	20.0	928	628	32.3
2009	381	191	50.0	547	437	20.0	928	628	32.3
2010	381	191	50.0	547	437	20.0	928	628	32.3
2011	381	191	50.0	547	437	20.0	928	628	32.3
2012	381	191	50.0	546	437	20.0	928	628	32.3
2013	381	190	50.0	546	437	20.0	927	628	32.3
2014	381	190	50.0	546	437	20.0	927	627	32.3
2015	381	190	50.0	546	437	20.0	927	627	32.3
2016	381	190	50.0	546	437	20.0	927	627	32.3
2017	381	190	50.0	546	437	20.0	927	627	32.3
2018	381	190	50.0	546	437	20.0	927	627	32.3
2019	381	190	50.0	546	437	20.0	926	627	32.3
2020	381	190	50.0	546	437	20.0	926	627	32.3
2021	380	190	50.0	546	437	20.0	926	627	32.3
2022	380	190	50.0	546	436	20.0	926	627	32.3
2023	380	190	50.0	545	436	20.0	926	627	32.3
2024	380	190	50.0	545	436	20.0	926	626	32.3
2025	380	190	50.0	545	436	20.0	926	626	32.3

Table D20
France - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	811	811	0.0	4,779	4,779	0.0	5,590	5,590	0.0
1985	882	882	0.0	5,193	5,193	0.0	6,075	6,075	0.0
1986	944	944	0.0	5,577	5,577	0.0	6,520	6,520	0.0
1987	1,039	1,039	0.0	5,891	5,891	0.0	6,930	6,930	0.0
1988	1,165	1,165	0.0	6,142	6,142	0.0	7,307	7,307	0.0
1989	1,293	1,293	0.0	6,360	6,360	0.0	7,653	7,653	0.0
1990	1,370	1,370	0.0	6,602	6,602	0.0	7,972	7,972	0.0
1991	1,419	1,419	0.0	6,749	6,749	0.0	8,168	8,168	0.0
1992	1,540	1,540	0.0	7,039	7,039	0.0	8,580	8,580	0.0
1993	1,628	1,628	0.0	7,359	7,359	0.0	8,986	8,986	0.0
1994	1,680	1,680	0.0	7,501	7,501	0.0	9,182	9,182	0.0
1995	1,759	1,759	0.0	7,674	7,674	0.0	9,433	9,433	0.0
1996	1,971	1,971	0.0	7,832	7,832	0.0	9,803	9,803	0.0
1997	2,230	2,230	0.0	7,910	7,910	0.0	10,139	10,139	0.0
1998	2,517	2,517	0.0	7,989	7,989	0.0	10,506	10,506	0.0
1999	2,814	2,814	0.0	7,958	7,958	0.0	10,772	10,772	0.0
2000	2,971	2,971	0.0	7,869	7,869	0.0	10,840	10,840	0.0
2001	3,166	3,166	0.0	7,736	7,736	0.0	10,902	10,902	0.0
2002	3,294	3,294	0.0	7,665	7,665	0.0	10,959	10,959	0.0
2003	3,412	3,412	0.0	7,599	7,599	0.0	11,011	11,011	0.0
2004	3,521	3,521	0.0	7,538	7,538	0.0	11,059	11,059	0.0
2005	3,621	3,430	5.3	7,482	7,373	1.5	11,103	10,803	2.7
2006	3,713	3,346	9.9	7,431	7,221	2.8	11,143	10,567	5.2
2007	3,797	3,269	13.9	7,383	7,080	4.1	11,180	10,350	7.4
2008	3,874	3,198	17.4	7,339	6,951	5.3	11,214	10,150	9.5
2009	3,946	3,133	20.6	7,299	6,833	6.4	11,245	9,966	11.4
2010	4,011	3,073	23.4	7,262	6,723	7.4	11,273	9,797	13.1
2011	4,071	3,018	25.9	7,227	6,623	8.4	11,299	9,641	14.7
2012	4,127	2,967	28.1	7,196	6,530	9.2	11,322	9,497	16.1
2013	4,178	2,920	30.1	7,166	6,445	10.1	11,344	9,365	17.4
2014	4,224	2,877	31.9	7,139	6,366	10.8	11,364	9,243	18.7
2015	4,267	2,837	33.5	7,114	6,294	11.5	11,382	9,131	19.8
2016	4,307	2,801	35.0	7,091	6,227	12.2	11,398	9,028	20.8
2017	4,343	2,767	36.3	7,070	6,166	12.8	11,413	8,933	21.7
2018	4,376	2,736	37.5	7,050	6,109	13.3	11,426	8,845	22.6
2019	4,406	2,707	38.6	7,032	6,057	13.9	11,439	8,765	23.4
2020	4,434	2,681	39.5	7,015	6,009	14.3	11,450	8,690	24.1
2021	4,460	2,657	40.4	7,000	5,965	14.8	11,460	8,622	24.8
2022	4,484	2,634	41.2	6,985	5,924	15.2	11,469	8,559	25.4
2023	4,505	2,614	42.0	6,972	5,887	15.6	11,477	8,501	25.9
2024	4,525	2,595	42.7	6,960	5,852	15.9	11,485	8,447	26.5
2025	4,543	2,577	43.3	6,948	5,820	16.2	11,492	8,398	26.9

Table D21
Germany - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	46	46	0.0	506	506	0.0	552	552	0.0
1986	44	44	0.0	542	542	0.0	586	586	0.0
1987	49	49	0.0	573	573	0.0	622	622	0.0
1988	68	68	0.0	592	592	0.0	660	660	0.0
1989	96	96	0.0	606	606	0.0	701	701	0.0
1990	108	108	0.0	791	791	0.0	899	899	0.0
1991	96	96	0.0	913	913	0.0	1,010	1,010	0.0
1992	177	177	0.0	1,069	1,069	0.0	1,246	1,246	0.0
1993	157	157	0.0	1,057	1,057	0.0	1,214	1,214	0.0
1994	246	246	0.0	1,019	1,019	0.0	1,265	1,265	0.0
1995	213	213	0.0	1,108	1,108	0.0	1,321	1,321	0.0
1996	248	248	0.0	1,150	1,150	0.0	1,399	1,399	0.0
1997	387	387	0.0	1,094	1,094	0.0	1,481	1,481	0.0
1998	345	345	0.0	1,149	1,149	0.0	1,494	1,494	0.0
1999	328	328	0.0	948	948	0.0	1,276	1,276	0.0
2000	348	348	0.0	1,007	1,007	0.0	1,355	1,355	0.0
2001	385	385	0.0	1,053	1,053	0.0	1,438	1,438	0.0
2002	384	384	0.0	1,143	1,143	0.0	1,527	1,527	0.0
2003	408	408	0.0	1,214	1,214	0.0	1,621	1,621	0.0
2004	433	433	0.0	1,288	1,288	0.0	1,722	1,722	0.0
2005	460	230	50.0	1,368	1,094	20.0	1,828	1,324	27.5
2006	488	244	50.0	1,452	1,162	20.0	1,941	1,406	27.5
2007	518	259	50.0	1,542	1,234	20.0	2,060	1,493	27.5
2008	550	275	50.0	1,637	1,310	20.0	2,187	1,585	27.5
2009	584	292	50.0	1,738	1,391	20.0	2,322	1,683	27.5
2010	620	310	50.0	1,846	1,476	20.0	2,466	1,787	27.5
2011	659	329	50.0	1,959	1,568	20.0	2,618	1,897	27.5
2012	699	350	50.0	2,080	1,664	20.0	2,779	2,014	27.5
2013	742	371	50.0	2,209	1,767	20.0	2,951	2,138	27.5
2014	788	394	50.0	2,345	1,876	20.0	3,133	2,270	27.5
2015	837	418	50.0	2,490	1,992	20.0	3,327	2,410	27.5
2016	888	444	50.0	2,643	2,115	20.0	3,532	2,559	27.5
2017	943	472	50.0	2,807	2,245	20.0	3,750	2,717	27.5
2018	1,001	501	50.0	2,980	2,384	20.0	3,981	2,884	27.5
2019	1,063	532	50.0	3,164	2,531	20.0	4,227	3,063	27.5
2020	1,129	564	50.0	3,359	2,687	20.0	4,488	3,252	27.5
2021	1,199	599	50.0	3,566	2,853	20.0	4,765	3,452	27.5
2022	1,272	636	50.0	3,786	3,029	20.0	5,059	3,665	27.5
2023	1,351	675	50.0	4,020	3,216	20.0	5,371	3,891	27.5
2024	1,434	717	50.0	4,268	3,414	20.0	5,702	4,132	27.5
2025	1,523	761	50.0	4,531	3,625	20.0	6,054	4,387	27.5

Table D22
Germany - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	274	274	0.0	3,037	3,037	0.0	3,311	3,311	0.0
1985	297	297	0.0	3,300	3,300	0.0	3,598	3,598	0.0
1986	318	318	0.0	3,578	3,578	0.0	3,896	3,896	0.0
1987	341	341	0.0	3,865	3,865	0.0	4,206	4,206	0.0
1988	382	382	0.0	4,148	4,148	0.0	4,530	4,530	0.0
1989	447	447	0.0	4,421	4,421	0.0	4,869	4,869	0.0
1990	520	520	0.0	4,859	4,859	0.0	5,378	5,378	0.0
1991	575	575	0.0	5,383	5,383	0.0	5,958	5,958	0.0
1992	706	706	0.0	6,021	6,021	0.0	6,727	6,727	0.0
1993	807	807	0.0	6,596	6,596	0.0	7,403	7,403	0.0
1994	988	988	0.0	7,088	7,088	0.0	8,076	8,076	0.0
1995	1,122	1,122	0.0	7,629	7,629	0.0	8,751	8,751	0.0
1996	1,281	1,281	0.0	8,169	8,169	0.0	9,449	9,449	0.0
1997	1,565	1,565	0.0	8,609	8,609	0.0	10,174	10,174	0.0
1998	1,785	1,785	0.0	9,069	9,069	0.0	10,855	10,855	0.0
1999	1,971	1,971	0.0	9,292	9,292	0.0	11,262	11,262	0.0
2000	2,161	2,161	0.0	9,555	9,555	0.0	11,716	11,716	0.0
2001	2,373	2,373	0.0	9,844	9,844	0.0	12,217	12,217	0.0
2002	2,568	2,568	0.0	10,199	10,199	0.0	12,767	12,767	0.0
2003	2,770	2,770	0.0	10,597	10,597	0.0	13,367	13,367	0.0
2004	2,982	2,982	0.0	11,038	11,038	0.0	14,019	14,019	0.0
2005	3,203	2,973	7.2	11,523	11,249	2.4	14,726	14,222	3.4
2006	3,435	2,979	13.3	12,053	11,511	4.5	15,488	14,490	6.4
2007	3,678	3,000	18.4	12,631	11,824	6.4	16,309	14,824	9.1
2008	3,934	3,035	22.9	13,258	12,188	8.1	17,192	15,223	11.5
2009	4,204	3,084	26.6	13,935	12,603	9.6	18,139	15,688	13.5
2010	4,488	3,148	29.9	14,666	13,071	10.9	19,154	16,219	15.3
2011	4,787	3,225	32.6	15,452	13,593	12.0	20,239	16,818	16.9
2012	5,103	3,317	35.0	16,296	14,170	13.0	21,400	17,487	18.3
2013	5,437	3,423	37.1	17,201	14,803	13.9	22,639	18,226	19.5
2014	5,790	3,543	38.8	18,170	15,495	14.7	23,961	19,038	20.5
2015	6,164	3,678	40.3	19,206	16,247	15.4	25,370	19,925	21.5
2016	6,559	3,828	41.6	20,313	17,062	16.0	26,873	20,890	22.3
2017	6,978	3,993	42.8	21,495	17,943	16.5	28,473	21,936	23.0
2018	7,421	4,174	43.7	22,755	18,891	17.0	30,176	23,065	23.6
2019	7,890	4,372	44.6	24,098	19,911	17.4	31,989	24,283	24.1
2020	8,388	4,587	45.3	25,529	21,005	17.7	33,917	25,591	24.5
2021	8,916	4,819	45.9	27,053	22,177	18.0	35,969	26,996	24.9
2022	9,475	5,070	46.5	28,675	23,432	18.3	38,150	28,502	25.3
2023	10,068	5,340	47.0	30,401	24,773	18.5	40,469	30,113	25.6
2024	10,697	5,630	47.4	32,237	26,206	18.7	42,933	31,836	25.8
2025	11,364	5,941	47.7	34,189	27,735	18.9	45,553	33,675	26.1

Table D23
Greece - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	1	1	0.0	7	7	0.0	8	8	0.0
1986	1	1	0.0	8	8	0.0	9	9	0.0
1987	2	2	0.0	9	9	0.0	11	11	0.0
1988	2	2	0.0	10	10	0.0	12	12	0.0
1989	3	3	0.0	11	11	0.0	14	14	0.0
1990	4	4	0.0	15	15	0.0	19	19	0.0
1991	5	5	0.0	19	19	0.0	24	24	0.0
1992	5	5	0.0	18	18	0.0	22	22	0.0
1993	5	5	0.0	21	21	0.0	26	26	0.0
1994	7	7	0.0	23	23	0.0	30	30	0.0
1995	8	8	0.0	27	27	0.0	34	34	0.0
1996	9	9	0.0	30	30	0.0	39	39	0.0
1997	12	12	0.0	32	32	0.0	44	44	0.0
1998	13	13	0.0	36	36	0.0	49	49	0.0
1999	15	15	0.0	38	38	0.0	54	54	0.0
2000	16	16	0.0	42	42	0.0	59	59	0.0
2001	18	18	0.0	45	45	0.0	64	64	0.0
2002	20	20	0.0	49	49	0.0	69	69	0.0
2003	21	21	0.0	52	52	0.0	73	73	0.0
2004	23	23	0.0	56	56	0.0	78	78	0.0
2005	24	12	50.0	59	47	20.0	83	59	28.7
2006	26	13	50.0	63	51	20.0	89	63	28.7
2007	27	14	50.0	68	54	20.0	95	68	28.7
2008	29	15	50.0	72	58	20.0	101	72	28.7
2009	31	16	50.0	77	62	20.0	108	77	28.7
2010	33	17	50.0	82	66	20.0	116	82	28.7
2011	36	18	50.0	88	70	20.0	123	88	28.7
2012	38	19	50.0	94	75	20.0	132	94	28.7
2013	41	20	50.0	100	80	20.0	141	100	28.7
2014	43	22	50.0	107	86	20.0	150	107	28.7
2015	46	23	50.0	114	91	20.0	160	114	28.7
2016	49	25	50.0	122	97	20.0	171	122	28.7
2017	53	26	50.0	130	104	20.0	183	130	28.7
2018	56	28	50.0	139	111	20.0	195	139	28.7
2019	60	30	50.0	148	119	20.0	208	149	28.7
2020	64	32	50.0	158	127	20.0	222	159	28.7
2021	69	34	50.0	169	135	20.0	237	169	28.7
2022	73	37	50.0	180	144	20.0	254	181	28.7
2023	78	39	50.0	193	154	20.0	271	193	28.7
2024	83	42	50.0	206	165	20.0	289	206	28.7
2025	89	45	50.0	220	176	20.0	309	220	28.7

Table D24
Greece - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	7	7	0.0	40	40	0.0	47	47	0.0
1985	7	7	0.0	43	43	0.0	51	51	0.0
1986	8	8	0.0	48	48	0.0	56	56	0.0
1987	9	9	0.0	53	53	0.0	62	62	0.0
1988	11	11	0.0	58	58	0.0	69	69	0.0
1989	13	13	0.0	65	65	0.0	78	78	0.0
1990	16	16	0.0	75	75	0.0	91	91	0.0
1991	19	19	0.0	88	88	0.0	107	107	0.0
1992	23	23	0.0	98	98	0.0	121	121	0.0
1993	26	26	0.0	111	111	0.0	137	137	0.0
1994	31	31	0.0	125	125	0.0	157	157	0.0
1995	37	37	0.0	142	142	0.0	179	179	0.0
1996	43	43	0.0	160	160	0.0	203	203	0.0
1997	51	51	0.0	180	180	0.0	231	231	0.0
1998	60	60	0.0	201	201	0.0	261	261	0.0
1999	71	71	0.0	223	223	0.0	294	294	0.0
2000	82	82	0.0	248	248	0.0	330	330	0.0
2001	94	94	0.0	273	273	0.0	367	367	0.0
2002	106	106	0.0	300	300	0.0	406	406	0.0
2003	119	119	0.0	328	328	0.0	447	447	0.0
2004	132	132	0.0	358	358	0.0	489	489	0.0
2005	145	133	8.3	388	376	3.1	533	510	4.5
2006	159	135	15.0	421	397	5.6	580	532	8.2
2007	174	138	20.5	455	419	7.7	628	558	11.3
2008	189	142	25.1	490	444	9.5	680	585	13.9
2009	205	146	28.9	528	470	11.1	734	616	16.1
2010	222	151	32.0	568	498	12.4	790	649	17.9
2011	240	157	34.7	611	528	13.5	851	685	19.5
2012	259	163	37.0	655	561	14.4	914	724	20.8
2013	279	170	38.9	703	596	15.2	982	767	21.9
2014	300	179	40.5	754	634	15.9	1,054	813	22.9
2015	322	187	41.8	808	675	16.5	1,130	862	23.7
2016	346	197	43.0	865	718	17.0	1,211	915	24.4
2017	371	208	44.0	926	765	17.4	1,297	972	25.0
2018	397	219	44.8	990	815	17.8	1,388	1,034	25.5
2019	426	232	45.6	1,059	868	18.1	1,485	1,100	26.0
2020	456	245	46.2	1,133	925	18.3	1,589	1,171	26.3
2021	488	260	46.7	1,211	986	18.6	1,699	1,246	26.7
2022	522	276	47.2	1,295	1,052	18.8	1,817	1,328	26.9
2023	558	293	47.6	1,384	1,122	18.9	1,942	1,414	27.2
2024	597	311	47.9	1,479	1,197	19.1	2,076	1,507	27.4
2025	638	331	48.2	1,580	1,276	19.2	2,218	1,607	27.6

Table D25
India - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	17	17	0.0	100	100	0.0	117	117	0.0
1986	20	20	0.0	108	108	0.0	128	128	0.0
1987	24	24	0.0	117	117	0.0	141	141	0.0
1988	28	28	0.0	127	127	0.0	155	155	0.0
1989	34	34	0.0	136	136	0.0	170	170	0.0
1990	57	57	0.0	221	221	0.0	277	277	0.0
1991	47	47	0.0	176	176	0.0	223	223	0.0
1992	60	60	0.0	224	224	0.0	284	284	0.0
1993	59	59	0.0	227	227	0.0	286	286	0.0
1994	85	85	0.0	275	275	0.0	360	360	0.0
1995	106	106	0.0	358	358	0.0	465	465	0.0
1996	114	114	0.0	372	372	0.0	486	486	0.0
1997	107	107	0.0	289	289	0.0	396	396	0.0
1998	129	129	0.0	347	347	0.0	476	476	0.0
1999	125	125	0.0	310	310	0.0	435	435	0.0
2000	134	134	0.0	344	344	0.0	478	478	0.0
2001	149	149	0.0	371	371	0.0	520	520	0.0
2002	162	162	0.0	399	399	0.0	561	561	0.0
2003	173	173	0.0	426	426	0.0	599	599	0.0
2004	185	185	0.0	455	455	0.0	640	640	0.0
2005	197	99	50.0	486	389	20.0	683	487	28.7
2006	210	105	50.0	519	415	20.0	729	520	28.7
2007	225	112	50.0	554	443	20.0	778	555	28.7
2008	240	120	50.0	591	473	20.0	831	593	28.7
2009	256	128	50.0	631	505	20.0	887	633	28.7
2010	273	137	50.0	674	539	20.0	947	676	28.7
2011	292	146	50.0	720	576	20.0	1,011	722	28.7
2012	312	156	50.0	768	615	20.0	1,080	770	28.7
2013	333	166	50.0	820	656	20.0	1,153	822	28.7
2014	355	178	50.0	876	700	20.0	1,231	878	28.7
2015	379	190	50.0	935	748	20.0	1,314	937	28.7
2016	405	202	50.0	998	798	20.0	1,403	1,001	28.7
2017	432	216	50.0	1,066	852	20.0	1,498	1,068	28.7
2018	461	231	50.0	1,138	910	20.0	1,599	1,141	28.7
2019	493	246	50.0	1,214	972	20.0	1,707	1,218	28.7
2020	526	263	50.0	1,297	1,037	20.0	1,822	1,300	28.7
2021	561	281	50.0	1,384	1,107	20.0	1,946	1,388	28.7
2022	599	300	50.0	1,478	1,182	20.0	2,077	1,482	28.7
2023	640	320	50.0	1,578	1,262	20.0	2,218	1,582	28.7
2024	683	342	50.0	1,685	1,348	20.0	2,368	1,689	28.7
2025	729	365	50.0	1,798	1,439	20.0	2,528	1,803	28.7

Table D26
India - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	103	103	0.0	598	598	0.0	701	701	0.0
1985	112	112	0.0	650	650	0.0	762	762	0.0
1986	123	123	0.0	706	706	0.0	830	830	0.0
1987	137	137	0.0	767	767	0.0	904	904	0.0
1988	154	154	0.0	833	833	0.0	987	987	0.0
1989	176	176	0.0	902	902	0.0	1,078	1,078	0.0
1990	219	219	0.0	1,050	1,050	0.0	1,269	1,269	0.0
1991	248	248	0.0	1,142	1,142	0.0	1,390	1,390	0.0
1992	288	288	0.0	1,275	1,275	0.0	1,563	1,563	0.0
1993	324	324	0.0	1,400	1,400	0.0	1,724	1,724	0.0
1994	383	383	0.0	1,562	1,562	0.0	1,946	1,946	0.0
1995	459	459	0.0	1,796	1,796	0.0	2,255	2,255	0.0
1996	536	536	0.0	2,024	2,024	0.0	2,561	2,561	0.0
1997	601	601	0.0	2,151	2,151	0.0	2,752	2,752	0.0
1998	681	681	0.0	2,326	2,326	0.0	3,008	3,008	0.0
1999	752	752	0.0	2,450	2,450	0.0	3,202	3,202	0.0
2000	825	825	0.0	2,599	2,599	0.0	3,424	3,424	0.0
2001	909	909	0.0	2,761	2,761	0.0	3,670	3,670	0.0
2002	998	998	0.0	2,939	2,939	0.0	3,937	3,937	0.0
2003	1,091	1,091	0.0	3,131	3,131	0.0	4,221	4,221	0.0
2004	1,188	1,188	0.0	3,335	3,335	0.0	4,523	4,523	0.0
2005	1,290	1,192	7.6	3,554	3,457	2.7	4,844	4,649	4.0
2006	1,397	1,201	14.0	3,789	3,596	5.1	5,186	4,797	7.5
2007	1,510	1,218	19.4	4,039	3,751	7.1	5,549	4,969	10.5
2008	1,629	1,240	23.9	4,308	3,924	8.9	5,937	5,164	13.0
2009	1,755	1,269	27.7	4,594	4,115	10.4	6,349	5,384	15.2
2010	1,888	1,304	30.9	4,901	4,325	11.7	6,788	5,629	17.1
2011	2,028	1,346	33.7	5,228	4,555	12.9	7,256	5,900	18.7
2012	2,178	1,394	36.0	5,578	4,805	13.9	7,756	6,198	20.1
2013	2,336	1,449	38.0	5,952	5,076	14.7	8,288	6,525	21.3
2014	2,504	1,510	39.7	6,351	5,371	15.4	8,856	6,881	22.3
2015	2,683	1,579	41.2	6,778	5,689	16.1	9,461	7,268	23.2
2016	2,873	1,655	42.4	7,234	6,032	16.6	10,107	7,687	23.9
2017	3,075	1,739	43.5	7,721	6,402	17.1	10,796	8,141	24.6
2018	3,291	1,830	44.4	8,241	6,800	17.5	11,531	8,630	25.2
2019	3,520	1,930	45.2	8,796	7,228	17.8	12,316	9,158	25.6
2020	3,764	2,038	45.8	9,389	7,687	18.1	13,153	9,725	26.1
2021	4,024	2,156	46.4	10,022	8,179	18.4	14,046	10,335	26.4
2022	4,302	2,283	46.9	10,698	8,707	18.6	15,000	10,990	26.7
2023	4,597	2,421	47.3	11,420	9,273	18.8	16,018	11,693	27.0
2024	4,913	2,568	47.7	12,191	9,879	19.0	17,104	12,447	27.2
2025	5,249	2,728	48.0	13,014	10,527	19.1	18,263	13,255	27.4

Table D27
Ireland - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	21	21	0.0	120	120	0.0	141	141	0.0
1986	23	23	0.0	126	126	0.0	150	150	0.0
1987	27	27	0.0	132	132	0.0	159	159	0.0
1988	31	31	0.0	138	138	0.0	169	169	0.0
1989	36	36	0.0	143	143	0.0	179	179	0.0
1990	39	39	0.0	152	152	0.0	191	191	0.0
1991	42	42	0.0	160	160	0.0	202	202	0.0
1992	62	62	0.0	232	232	0.0	294	294	0.0
1993	28	28	0.0	105	105	0.0	133	133	0.0
1994	40	40	0.0	127	127	0.0	167	167	0.0
1995	40	40	0.0	136	136	0.0	177	177	0.0
1996	48	48	0.0	158	158	0.0	206	206	0.0
1997	65	65	0.0	175	175	0.0	240	240	0.0
1998	76	76	0.0	206	206	0.0	282	282	0.0
1999	94	94	0.0	234	234	0.0	328	328	0.0
2000	97	97	0.0	251	251	0.0	348	348	0.0
2001	106	106	0.0	264	264	0.0	370	370	0.0
2002	113	113	0.0	280	280	0.0	393	393	0.0
2003	120	120	0.0	297	297	0.0	417	417	0.0
2004	128	128	0.0	315	315	0.0	443	443	0.0
2005	136	68	50.0	335	268	20.0	471	336	28.7
2006	144	72	50.0	356	285	20.0	500	357	28.7
2007	153	77	50.0	378	302	20.0	531	379	28.7
2008	163	81	50.0	402	321	20.0	564	403	28.7
2009	173	86	50.0	427	341	20.0	599	428	28.7
2010	184	92	50.0	453	362	20.0	637	454	28.7
2011	195	98	50.0	481	385	20.0	676	483	28.7
2012	207	104	50.0	511	409	20.0	718	513	28.7
2013	220	110	50.0	543	434	20.0	763	544	28.7
2014	234	117	50.0	577	461	20.0	811	578	28.7
2015	248	124	50.0	613	490	20.0	861	614	28.7
2016	264	132	50.0	651	521	20.0	915	652	28.7
2017	280	140	50.0	691	553	20.0	971	693	28.7
2018	298	149	50.0	734	587	20.0	1,032	736	28.7
2019	316	158	50.0	780	624	20.0	1,096	782	28.7
2020	336	168	50.0	828	663	20.0	1,164	831	28.7
2021	357	178	50.0	880	704	20.0	1,237	882	28.7
2022	379	189	50.0	935	748	20.0	1,314	937	28.7
2023	403	201	50.0	993	794	20.0	1,395	995	28.7
2024	428	214	50.0	1,054	844	20.0	1,482	1,057	28.7
2025	454	227	50.0	1,120	896	20.0	1,574	1,123	28.7

Table D28
Ireland - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	124	124	0.0	721	721	0.0	845	845	0.0
1985	135	135	0.0	783	783	0.0	919	919	0.0
1986	148	148	0.0	847	847	0.0	995	995	0.0
1987	163	163	0.0	911	911	0.0	1,074	1,074	0.0
1988	180	180	0.0	977	977	0.0	1,157	1,157	0.0
1989	202	202	0.0	1,042	1,042	0.0	1,244	1,244	0.0
1990	225	225	0.0	1,110	1,110	0.0	1,335	1,335	0.0
1991	249	249	0.0	1,181	1,181	0.0	1,430	1,430	0.0
1992	291	291	0.0	1,319	1,319	0.0	1,610	1,610	0.0
1993	296	296	0.0	1,318	1,318	0.0	1,614	1,614	0.0
1994	311	311	0.0	1,340	1,340	0.0	1,652	1,652	0.0
1995	327	327	0.0	1,370	1,370	0.0	1,697	1,697	0.0
1996	349	349	0.0	1,418	1,418	0.0	1,767	1,767	0.0
1997	386	386	0.0	1,480	1,480	0.0	1,866	1,866	0.0
1998	432	432	0.0	1,567	1,567	0.0	1,999	1,999	0.0
1999	491	491	0.0	1,675	1,675	0.0	2,167	2,167	0.0
2000	549	549	0.0	1,792	1,792	0.0	2,342	2,342	0.0
2001	612	612	0.0	1,913	1,913	0.0	2,524	2,524	0.0
2002	676	676	0.0	2,039	2,039	0.0	2,715	2,715	0.0
2003	743	743	0.0	2,173	2,173	0.0	2,916	2,916	0.0
2004	811	811	0.0	2,315	2,315	0.0	3,126	3,126	0.0
2005	882	814	7.7	2,465	2,397	2.7	3,347	3,212	4.0
2006	956	821	14.1	2,623	2,490	5.1	3,579	3,312	7.5
2007	1,033	832	19.4	2,791	2,594	7.1	3,824	3,426	10.4
2008	1,113	847	23.9	2,970	2,707	8.8	4,083	3,554	12.9
2009	1,197	866	27.7	3,159	2,832	10.3	4,355	3,698	15.1
2010	1,285	888	30.9	3,359	2,968	11.6	4,644	3,856	17.0
2011	1,377	915	33.6	3,572	3,115	12.8	4,949	4,030	18.6
2012	1,474	945	35.9	3,797	3,275	13.7	5,271	4,220	19.9
2013	1,577	980	37.9	4,036	3,448	14.6	5,613	4,427	21.1
2014	1,684	1,018	39.5	4,290	3,633	15.3	5,974	4,651	22.1
2015	1,798	1,061	41.0	4,559	3,833	15.9	6,357	4,894	23.0
2016	1,918	1,108	42.2	4,845	4,046	16.5	6,763	5,155	23.8
2017	2,045	1,160	43.3	5,149	4,276	17.0	7,194	5,435	24.4
2018	2,179	1,216	44.2	5,471	4,521	17.4	7,650	5,737	25.0
2019	2,321	1,277	45.0	5,813	4,783	17.7	8,134	6,060	25.5
2020	2,471	1,342	45.7	6,177	5,063	18.0	8,648	6,406	25.9
2021	2,630	1,413	46.3	6,562	5,362	18.3	9,192	6,775	26.3
2022	2,799	1,490	46.8	6,972	5,681	18.5	9,771	7,170	26.6
2023	2,977	1,572	47.2	7,407	6,020	18.7	10,384	7,592	26.9
2024	3,167	1,660	47.6	7,869	6,382	18.9	11,035	8,042	27.1
2025	3,368	1,754	47.9	8,359	6,768	19.0	11,727	8,522	27.3

Table D29
Italy - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	7	7	0.0	136	136	0.0	142	142	0.0
1986	11	11	0.0	155	155	0.0	166	166	0.0
1987	21	21	0.0	173	173	0.0	194	194	0.0
1988	11	11	0.0	215	215	0.0	226	226	0.0
1989	30	30	0.0	234	234	0.0	264	264	0.0
1990	28	28	0.0	250	250	0.0	278	278	0.0
1991	35	35	0.0	242	242	0.0	277	277	0.0
1992	167	167	0.0	778	778	0.0	945	945	0.0
1993	83	83	0.0	579	579	0.0	663	663	0.0
1994	137	137	0.0	604	604	0.0	740	740	0.0
1995	157	157	0.0	548	548	0.0	705	705	0.0
1996	227	227	0.0	743	743	0.0	970	970	0.0
1997	298	298	0.0	583	583	0.0	881	881	0.0
1998	244	244	0.0	819	819	0.0	1,063	1,063	0.0
1999	208	208	0.0	1,033	1,033	0.0	1,241	1,241	0.0
2000	296	296	0.0	1,141	1,141	0.0	1,437	1,437	0.0
2001	462	462	0.0	1,187	1,187	0.0	1,649	1,649	0.0
2002	592	592	0.0	1,284	1,284	0.0	1,875	1,875	0.0
2003	667	667	0.0	1,447	1,447	0.0	2,114	2,114	0.0
2004	745	745	0.0	1,617	1,617	0.0	2,363	2,363	0.0
2005	825	413	50.0	1,791	1,433	20.0	2,617	1,846	29.5
2006	906	453	50.0	1,966	1,573	20.0	2,872	2,026	29.5
2007	985	493	50.0	2,138	1,710	20.0	3,123	2,203	29.5
2008	1,061	531	50.0	2,303	1,843	20.0	3,365	2,373	29.5
2009	1,133	567	50.0	2,459	1,967	20.0	3,592	2,534	29.5
2010	1,210	605	50.0	2,626	2,100	20.0	3,835	2,705	29.5
2011	1,292	646	50.0	2,803	2,242	20.0	4,095	2,888	29.5
2012	1,379	689	50.0	2,993	2,394	20.0	4,372	3,084	29.5
2013	1,472	736	50.0	3,195	2,556	20.0	4,667	3,292	29.5
2014	1,572	786	50.0	3,411	2,729	20.0	4,983	3,515	29.5
2015	1,678	839	50.0	3,642	2,913	20.0	5,320	3,752	29.5
2016	1,792	896	50.0	3,888	3,110	20.0	5,680	4,006	29.5
2017	1,913	956	50.0	4,151	3,321	20.0	6,064	4,277	29.5
2018	2,042	1,021	50.0	4,432	3,545	20.0	6,474	4,566	29.5
2019	2,180	1,090	50.0	4,731	3,785	20.0	6,912	4,875	29.5
2020	2,328	1,164	50.0	5,051	4,041	20.0	7,379	5,205	29.5
2021	2,485	1,242	50.0	5,393	4,314	20.0	7,878	5,557	29.5
2022	2,653	1,327	50.0	5,758	4,606	20.0	8,411	5,933	29.5
2023	2,832	1,416	50.0	6,147	4,918	20.0	8,979	6,334	29.5
2024	3,024	1,512	50.0	6,563	5,250	20.0	9,587	6,762	29.5
2025	3,228	1,614	50.0	7,006	5,605	20.0	10,235	7,219	29.5

Table D30
Italy - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	39	39	0.0	813	813	0.0	852	852	0.0
1985	43	43	0.0	884	884	0.0	926	926	0.0
1986	50	50	0.0	968	968	0.0	1,018	1,018	0.0
1987	67	67	0.0	1,063	1,063	0.0	1,130	1,130	0.0
1988	73	73	0.0	1,193	1,193	0.0	1,266	1,266	0.0
1989	97	97	0.0	1,332	1,332	0.0	1,428	1,428	0.0
1990	117	117	0.0	1,475	1,475	0.0	1,592	1,592	0.0
1991	143	143	0.0	1,599	1,599	0.0	1,742	1,742	0.0
1992	299	299	0.0	2,249	2,249	0.0	2,548	2,548	0.0
1993	358	358	0.0	2,648	2,648	0.0	3,007	3,007	0.0
1994	467	467	0.0	3,040	3,040	0.0	3,507	3,507	0.0
1995	586	586	0.0	3,345	3,345	0.0	3,931	3,931	0.0
1996	766	766	0.0	3,820	3,820	0.0	4,586	4,586	0.0
1997	1,003	1,003	0.0	4,098	4,098	0.0	5,101	5,101	0.0
1998	1,167	1,167	0.0	4,589	4,589	0.0	5,756	5,756	0.0
1999	1,282	1,282	0.0	5,255	5,255	0.0	6,537	6,537	0.0
2000	1,475	1,475	0.0	5,976	5,976	0.0	7,451	7,451	0.0
2001	1,818	1,818	0.0	6,685	6,685	0.0	8,503	8,503	0.0
2002	2,264	2,264	0.0	7,434	7,434	0.0	9,698	9,698	0.0
2003	2,750	2,750	0.0	8,287	8,287	0.0	11,037	11,037	0.0
2004	3,275	3,275	0.0	9,241	9,241	0.0	12,517	12,517	0.0
2005	3,839	3,426	10.8	10,293	9,935	3.5	14,132	13,361	5.5
2006	4,438	3,605	18.8	11,436	10,713	6.3	15,873	14,318	9.8
2007	5,068	3,809	24.8	12,659	11,566	8.6	17,726	15,375	13.3
2008	5,724	4,035	29.5	13,949	12,484	10.5	19,673	16,519	16.0
2009	6,399	4,279	33.1	15,293	13,452	12.0	21,692	17,731	18.3
2010	7,097	4,541	36.0	16,695	14,477	13.3	23,792	19,018	20.1
2011	7,821	4,824	38.3	18,162	15,561	14.3	25,983	20,385	21.5
2012	8,574	5,128	40.2	19,702	16,710	15.2	28,276	21,838	22.8
2013	9,360	5,453	41.7	21,321	17,929	15.9	30,681	23,383	23.8
2014	10,183	5,803	43.0	23,026	19,224	16.5	33,210	25,027	24.6
2015	11,047	6,178	44.1	24,826	20,599	17.0	35,873	26,777	25.4
2016	11,955	6,579	45.0	26,728	22,062	17.5	38,683	28,641	26.0
2017	12,911	7,009	45.7	28,741	23,618	17.8	41,652	30,627	26.5
2018	13,920	7,470	46.3	30,873	25,274	18.1	44,793	32,743	26.9
2019	14,987	7,962	46.9	33,135	27,037	18.4	48,121	34,999	27.3
2020	16,115	8,489	47.3	35,535	28,915	18.6	51,650	37,404	27.6
2021	17,311	9,052	47.7	38,085	30,916	18.8	55,396	39,969	27.8
2022	18,579	9,655	48.0	40,796	33,049	19.0	59,375	42,704	28.1
2023	19,925	10,299	48.3	43,679	35,323	19.1	63,605	45,621	28.3
2024	21,355	10,987	48.6	46,748	37,747	19.3	68,103	48,734	28.4
2025	22,875	11,722	48.8	50,014	40,332	19.4	72,890	52,054	28.6

Table D31
Japan - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	194	194	0.0	1,173	1,173	0.0	1,367	1,367	0.0
1986	164	164	0.0	1,267	1,267	0.0	1,431	1,431	0.0
1987	238	238	0.0	1,260	1,260	0.0	1,498	1,498	0.0
1988	201	201	0.0	1,367	1,367	0.0	1,568	1,568	0.0
1989	234	234	0.0	1,407	1,407	0.0	1,641	1,641	0.0
1990	271	271	0.0	1,728	1,728	0.0	1,999	1,999	0.0
1991	391	391	0.0	1,868	1,868	0.0	2,259	2,259	0.0
1992	424	424	0.0	1,919	1,919	0.0	2,343	2,343	0.0
1993	413	413	0.0	2,327	2,327	0.0	2,741	2,741	0.0
1994	372	372	0.0	1,832	1,832	0.0	2,204	2,204	0.0
1995	487	487	0.0	2,575	2,575	0.0	3,062	3,062	0.0
1996	428	428	0.0	1,945	1,945	0.0	2,372	2,372	0.0
1997	466	466	0.0	2,147	2,147	0.0	2,613	2,613	0.0
1998	436	436	0.0	2,026	2,026	0.0	2,462	2,462	0.0
1999	487	487	0.0	2,105	2,105	0.0	2,592	2,592	0.0
2000	515	515	0.0	2,198	2,198	0.0	2,713	2,713	0.0
2001	629	629	0.0	2,211	2,211	0.0	2,840	2,840	0.0
2002	714	714	0.0	2,258	2,258	0.0	2,973	2,973	0.0
2003	748	748	0.0	2,364	2,364	0.0	3,111	3,111	0.0
2004	783	783	0.0	2,474	2,474	0.0	3,257	3,257	0.0
2005	819	410	50.0	2,590	2,072	20.0	3,409	2,481	27.2
2006	858	429	50.0	2,711	2,169	20.0	3,569	2,597	27.2
2007	898	449	50.0	2,838	2,270	20.0	3,735	2,719	27.2
2008	940	470	50.0	2,970	2,376	20.0	3,910	2,846	27.2
2009	984	492	50.0	3,109	2,487	20.0	4,093	2,979	27.2
2010	1,030	515	50.0	3,254	2,603	20.0	4,284	3,118	27.2
2011	1,078	539	50.0	3,406	2,725	20.0	4,484	3,264	27.2
2012	1,128	564	50.0	3,566	2,853	20.0	4,694	3,417	27.2
2013	1,181	590	50.0	3,732	2,986	20.0	4,913	3,576	27.2
2014	1,236	618	50.0	3,907	3,125	20.0	5,143	3,744	27.2
2015	1,294	647	50.0	4,089	3,272	20.0	5,383	3,919	27.2
2016	1,354	677	50.0	4,281	3,425	20.0	5,635	4,102	27.2
2017	1,418	709	50.0	4,481	3,585	20.0	5,898	4,293	27.2
2018	1,484	742	50.0	4,690	3,752	20.0	6,174	4,494	27.2
2019	1,553	777	50.0	4,909	3,928	20.0	6,463	4,704	27.2
2020	1,626	813	50.0	5,139	4,111	20.0	6,765	4,924	27.2
2021	1,702	851	50.0	5,379	4,303	20.0	7,081	5,154	27.2
2022	1,782	891	50.0	5,631	4,505	20.0	7,412	5,395	27.2
2023	1,865	932	50.0	5,894	4,715	20.0	7,759	5,648	27.2
2024	1,952	976	50.0	6,169	4,935	20.0	8,121	5,911	27.2
2025	2,043	1,022	50.0	6,458	5,166	20.0	8,501	6,188	27.2

Table D32
Japan - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	1,164	1,164	0.0	7,039	7,039	0.0	8,203	8,203	0.0
1985	1,265	1,265	0.0	7,649	7,649	0.0	8,914	8,914	0.0
1986	1,328	1,328	0.0	8,304	8,304	0.0	9,632	9,632	0.0
1987	1,460	1,460	0.0	8,900	8,900	0.0	10,359	10,359	0.0
1988	1,544	1,544	0.0	9,554	9,554	0.0	11,099	11,099	0.0
1989	1,655	1,655	0.0	10,197	10,197	0.0	11,852	11,852	0.0
1990	1,793	1,793	0.0	11,110	11,110	0.0	12,903	12,903	0.0
1991	2,040	2,040	0.0	12,089	12,089	0.0	14,130	14,130	0.0
1992	2,301	2,301	0.0	13,041	13,041	0.0	15,342	15,342	0.0
1993	2,530	2,530	0.0	14,325	14,325	0.0	16,855	16,855	0.0
1994	2,700	2,700	0.0	15,011	15,011	0.0	17,711	17,711	0.0
1995	2,971	2,971	0.0	16,385	16,385	0.0	19,356	19,356	0.0
1996	3,161	3,161	0.0	17,019	17,019	0.0	20,180	20,180	0.0
1997	3,374	3,374	0.0	17,805	17,805	0.0	21,179	21,179	0.0
1998	3,540	3,540	0.0	18,406	18,406	0.0	21,946	21,946	0.0
1999	3,744	3,744	0.0	19,038	19,038	0.0	22,782	22,782	0.0
2000	3,959	3,959	0.0	19,714	19,714	0.0	23,673	23,673	0.0
2001	4,271	4,271	0.0	20,348	20,348	0.0	24,619	24,619	0.0
2002	4,644	4,644	0.0	20,978	20,978	0.0	25,622	25,622	0.0
2003	5,020	5,020	0.0	21,663	21,663	0.0	26,683	26,683	0.0
2004	5,401	5,401	0.0	22,404	22,404	0.0	27,806	27,806	0.0
2005	5,789	5,379	7.1	23,202	22,684	2.2	28,990	28,063	3.2
2006	6,183	5,377	13.0	24,056	23,038	4.2	30,240	28,415	6.0
2007	6,586	5,396	18.1	24,969	23,465	6.0	31,556	28,861	8.5
2008	6,999	5,434	22.4	25,942	23,964	7.6	32,941	29,398	10.8
2009	7,423	5,491	26.0	26,976	24,534	9.1	34,399	30,025	12.7
2010	7,859	5,567	29.2	28,072	25,175	10.3	35,931	30,742	14.4
2011	8,308	5,661	31.9	29,233	25,886	11.4	37,541	31,546	16.0
2012	8,772	5,772	34.2	30,460	26,667	12.5	39,231	32,439	17.3
2013	9,251	5,901	36.2	31,755	27,520	13.3	41,006	33,420	18.5
2014	9,747	6,047	38.0	33,122	28,444	14.1	42,869	34,490	19.5
2015	10,261	6,210	39.5	34,562	29,440	14.8	44,823	35,650	20.5
2016	10,795	6,390	40.8	36,077	30,509	15.4	46,872	36,900	21.3
2017	11,349	6,588	42.0	37,672	31,653	16.0	49,021	38,241	22.0
2018	11,925	6,803	43.0	39,348	32,873	16.5	51,273	39,676	22.6
2019	12,524	7,035	43.8	41,110	34,171	16.9	53,634	41,206	23.2
2020	13,148	7,285	44.6	42,960	35,548	17.3	56,108	42,834	23.7
2021	13,798	7,554	45.3	44,902	37,008	17.6	58,701	44,561	24.1
2022	14,476	7,840	45.8	46,941	38,552	17.9	61,417	46,392	24.5
2023	15,183	8,145	46.4	49,079	40,183	18.1	64,262	48,328	24.8
2024	15,920	8,470	46.8	51,322	41,903	18.4	67,243	50,373	25.1
2025	16,690	8,814	47.2	53,674	43,717	18.6	70,364	52,531	25.3

Table D33
Korea - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	35	35	0.0	203	203	0.0	238	238	0.0
1986	39	39	0.0	213	213	0.0	252	252	0.0
1987	45	45	0.0	222	222	0.0	267	267	0.0
1988	51	51	0.0	232	232	0.0	283	283	0.0
1989	61	61	0.0	240	240	0.0	300	300	0.0
1990	65	65	0.0	253	253	0.0	318	318	0.0
1991	80	80	0.0	303	303	0.0	382	382	0.0
1992	84	84	0.0	314	314	0.0	399	399	0.0
1993	58	58	0.0	221	221	0.0	279	279	0.0
1994	101	101	0.0	324	324	0.0	424	424	0.0
1995	154	154	0.0	518	518	0.0	672	672	0.0
1996	66	66	0.0	216	216	0.0	282	282	0.0
1997	92	92	0.0	248	248	0.0	340	340	0.0
1998	80	80	0.0	217	217	0.0	297	297	0.0
1999	154	154	0.0	383	383	0.0	537	537	0.0
2000	159	159	0.0	410	410	0.0	569	569	0.0
2001	173	173	0.0	430	430	0.0	603	603	0.0
2002	184	184	0.0	455	455	0.0	639	639	0.0
2003	195	195	0.0	482	482	0.0	678	678	0.0
2004	207	207	0.0	511	511	0.0	718	718	0.0
2005	220	110	50.0	541	433	20.0	761	543	28.7
2006	233	116	50.0	574	459	20.0	807	575	28.7
2007	247	123	50.0	608	487	20.0	855	610	28.7
2008	261	131	50.0	645	516	20.0	906	646	28.7
2009	277	139	50.0	683	547	20.0	960	685	28.7
2010	294	147	50.0	724	579	20.0	1,018	726	28.7
2011	311	156	50.0	767	614	20.0	1,079	770	28.7
2012	330	165	50.0	813	651	20.0	1,143	816	28.7
2013	350	175	50.0	862	690	20.0	1,212	864	28.7
2014	370	185	50.0	914	731	20.0	1,284	916	28.7
2015	393	196	50.0	968	775	20.0	1,361	971	28.7
2016	416	208	50.0	1,026	821	20.0	1,442	1,029	28.7
2017	441	221	50.0	1,088	870	20.0	1,529	1,091	28.7
2018	467	234	50.0	1,153	922	20.0	1,620	1,156	28.7
2019	495	248	50.0	1,222	977	20.0	1,717	1,225	28.7
2020	525	263	50.0	1,295	1,036	20.0	1,820	1,298	28.7
2021	557	278	50.0	1,372	1,098	20.0	1,929	1,376	28.7
2022	590	295	50.0	1,455	1,164	20.0	2,044	1,459	28.7
2023	625	313	50.0	1,542	1,233	20.0	2,167	1,546	28.7
2024	663	331	50.0	1,634	1,307	20.0	2,296	1,638	28.7
2025	702	351	50.0	1,732	1,385	20.0	2,434	1,736	28.7

Table D34
Korea - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	210	210	0.0	1,218	1,218	0.0	1,428	1,428	0.0
1985	228	228	0.0	1,323	1,323	0.0	1,552	1,552	0.0
1986	249	249	0.0	1,430	1,430	0.0	1,680	1,680	0.0
1987	275	275	0.0	1,538	1,538	0.0	1,813	1,813	0.0
1988	304	304	0.0	1,647	1,647	0.0	1,951	1,951	0.0
1989	340	340	0.0	1,755	1,755	0.0	2,095	2,095	0.0
1990	378	378	0.0	1,868	1,868	0.0	2,246	2,246	0.0
1991	428	428	0.0	2,021	2,021	0.0	2,449	2,449	0.0
1992	478	478	0.0	2,174	2,174	0.0	2,651	2,651	0.0
1993	497	497	0.0	2,221	2,221	0.0	2,718	2,718	0.0
1994	558	558	0.0	2,367	2,367	0.0	2,925	2,925	0.0
1995	667	667	0.0	2,696	2,696	0.0	3,363	3,363	0.0
1996	680	680	0.0	2,696	2,696	0.0	3,376	3,376	0.0
1997	718	718	0.0	2,728	2,728	0.0	3,446	3,446	0.0
1998	741	741	0.0	2,727	2,727	0.0	3,468	3,468	0.0
1999	836	836	0.0	2,892	2,892	0.0	3,727	3,727	0.0
2000	928	928	0.0	3,070	3,070	0.0	3,998	3,998	0.0
2001	1,027	1,027	0.0	3,255	3,255	0.0	4,282	4,282	0.0
2002	1,129	1,129	0.0	3,449	3,449	0.0	4,578	4,578	0.0
2003	1,234	1,234	0.0	3,655	3,655	0.0	4,890	4,890	0.0
2004	1,343	1,343	0.0	3,874	3,874	0.0	5,217	5,217	0.0
2005	1,455	1,345	7.5	4,105	3,997	2.6	5,560	5,342	3.9
2006	1,571	1,354	13.8	4,351	4,136	4.9	5,922	5,490	7.3
2007	1,692	1,369	19.1	4,611	4,292	6.9	6,303	5,661	10.2
2008	1,818	1,390	23.5	4,887	4,464	8.6	6,705	5,854	12.7
2009	1,950	1,417	27.3	5,179	4,654	10.1	7,129	6,071	14.8
2010	2,088	1,451	30.5	5,489	4,861	11.4	7,576	6,312	16.7
2011	2,232	1,490	33.2	5,817	5,086	12.6	8,049	6,576	18.3
2012	2,383	1,536	35.5	6,165	5,330	13.6	8,548	6,866	19.7
2013	2,542	1,588	37.5	6,534	5,593	14.4	9,076	7,181	20.9
2014	2,709	1,646	39.2	6,925	5,876	15.1	9,634	7,523	21.9
2015	2,885	1,711	40.7	7,339	6,181	15.8	10,224	7,892	22.8
2016	3,070	1,782	42.0	7,778	6,507	16.3	10,849	8,289	23.6
2017	3,266	1,860	43.0	8,244	6,857	16.8	11,509	8,717	24.3
2018	3,472	1,945	44.0	8,737	7,231	17.2	12,209	9,176	24.8
2019	3,690	2,037	44.8	9,260	7,630	17.6	12,949	9,667	25.4
2020	3,920	2,137	45.5	9,814	8,055	17.9	13,733	10,192	25.8
2021	4,163	2,244	46.1	10,401	8,509	18.2	14,564	10,753	26.2
2022	4,419	2,359	46.6	11,024	8,992	18.4	15,443	11,351	26.5
2023	4,691	2,483	47.1	11,683	9,505	18.6	16,374	11,989	26.8
2024	4,978	2,616	47.5	12,382	10,052	18.8	17,361	12,668	27.0
2025	5,282	2,758	47.8	13,123	10,633	19.0	18,406	13,391	27.2

Table D35
Malaysia - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	1	1	0.0	8	8	0.0	9	9	0.0
1986	2	2	0.0	8	8	0.0	10	10	0.0
1987	2	2	0.0	9	9	0.0	11	11	0.0
1988	2	2	0.0	9	9	0.0	11	11	0.0
1989	2	2	0.0	9	9	0.0	12	12	0.0
1990	3	3	0.0	10	10	0.0	12	12	0.0
1991	3	3	0.0	10	10	0.0	13	13	0.0
1992	3	3	0.0	11	11	0.0	14	14	0.0
1993	3	3	0.0	12	12	0.0	15	15	0.0
1994	3	3	0.0	9	9	0.0	12	12	0.0
1995	7	7	0.0	23	23	0.0	30	30	0.0
1996	7	7	0.0	24	24	0.0	32	32	0.0
1997	8	8	0.0	20	20	0.0	28	28	0.0
1998	5	5	0.0	14	14	0.0	20	20	0.0
1999	4	4	0.0	10	10	0.0	14	14	0.0
2000	6	6	0.0	15	15	0.0	21	21	0.0
2001	7	7	0.0	16	16	0.0	23	23	0.0
2002	7	7	0.0	17	17	0.0	24	24	0.0
2003	8	8	0.0	19	19	0.0	26	26	0.0
2004	8	8	0.0	20	20	0.0	28	28	0.0
2005	9	4	50.0	21	17	20.0	30	21	28.7
2006	9	5	50.0	23	18	20.0	32	23	28.7
2007	10	5	50.0	24	19	20.0	34	24	28.7
2008	10	5	50.0	26	21	20.0	36	26	28.7
2009	11	6	50.0	27	22	20.0	39	28	28.7
2010	12	6	50.0	29	23	20.0	41	29	28.7
2011	13	6	50.0	31	25	20.0	44	31	28.7
2012	14	7	50.0	33	27	20.0	47	34	28.7
2013	14	7	50.0	36	29	20.0	50	36	28.7
2014	15	8	50.0	38	30	20.0	54	38	28.7
2015	16	8	50.0	41	33	20.0	57	41	28.7
2016	18	9	50.0	43	35	20.0	61	44	28.7
2017	19	9	50.0	46	37	20.0	65	46	28.7
2018	20	10	50.0	49	40	20.0	70	50	28.7
2019	21	11	50.0	53	42	20.0	74	53	28.7
2020	23	11	50.0	56	45	20.0	79	57	28.7
2021	24	12	50.0	60	48	20.0	85	60	28.7
2022	26	13	50.0	64	51	20.0	90	64	28.7
2023	28	14	50.0	69	55	20.0	96	69	28.7
2024	30	15	50.0	73	59	20.0	103	73	28.7
2025	32	16	50.0	78	63	20.0	110	78	28.7

Table D36
Malaysia - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	8	8	0.0	48	48	0.0	57	57	0.0
1985	9	9	0.0	53	53	0.0	62	62	0.0
1986	10	10	0.0	57	57	0.0	67	67	0.0
1987	11	11	0.0	61	61	0.0	72	72	0.0
1988	12	12	0.0	65	65	0.0	77	77	0.0
1989	13	13	0.0	70	70	0.0	83	83	0.0
1990	15	15	0.0	74	74	0.0	89	89	0.0
1991	16	16	0.0	78	78	0.0	95	95	0.0
1992	18	18	0.0	83	83	0.0	101	101	0.0
1993	20	20	0.0	88	88	0.0	108	108	0.0
1994	21	21	0.0	90	90	0.0	111	111	0.0
1995	26	26	0.0	106	106	0.0	133	133	0.0
1996	32	32	0.0	122	122	0.0	154	154	0.0
1997	37	37	0.0	133	133	0.0	169	169	0.0
1998	39	39	0.0	137	137	0.0	176	176	0.0
1999	40	40	0.0	135	135	0.0	175	175	0.0
2000	43	43	0.0	140	140	0.0	183	183	0.0
2001	46	46	0.0	145	145	0.0	191	191	0.0
2002	49	49	0.0	151	151	0.0	200	200	0.0
2003	53	53	0.0	157	157	0.0	210	210	0.0
2004	57	57	0.0	165	165	0.0	221	221	0.0
2005	61	56	7.1	173	168	2.5	233	225	3.7
2006	65	56	13.1	181	173	4.6	246	229	6.9
2007	70	57	18.3	191	178	6.6	260	235	9.7
2008	74	57	22.8	201	185	8.3	276	242	12.2
2009	80	58	26.6	213	192	9.8	292	250	14.4
2010	85	60	29.8	225	200	11.1	310	260	16.3
2011	91	61	32.7	238	209	12.3	329	270	17.9
2012	97	63	35.1	253	219	13.3	350	282	19.4
2013	104	65	37.1	268	230	14.2	372	295	20.6
2014	111	68	38.9	285	242	15.0	396	310	21.7
2015	119	71	40.5	303	255	15.7	421	326	22.6
2016	127	74	41.8	322	270	16.2	449	343	23.5
2017	135	77	42.9	342	285	16.7	478	362	24.2
2018	145	81	43.9	365	302	17.2	509	383	24.8
2019	155	85	44.8	388	320	17.6	543	405	25.3
2020	165	90	45.5	414	340	17.9	579	430	25.8
2021	176	95	46.1	441	361	18.2	617	456	26.2
2022	188	100	46.6	470	383	18.4	658	484	26.5
2023	201	106	47.1	501	407	18.7	702	514	26.8
2024	215	113	47.5	534	433	18.8	749	546	27.1
2025	229	120	47.9	570	461	19.0	799	581	27.3

Table D37
Mexico - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	8	8	0.0	44	44	0.0	52	52	0.0
1986	7	7	0.0	38	38	0.0	45	45	0.0
1987	5	5	0.0	25	25	0.0	30	30	0.0
1988	6	6	0.0	28	28	0.0	34	34	0.0
1989	12	12	0.0	47	47	0.0	59	59	0.0
1990	13	13	0.0	49	49	0.0	62	62	0.0
1991	15	15	0.0	59	59	0.0	74	74	0.0
1992	27	27	0.0	99	99	0.0	126	126	0.0
1993	44	44	0.0	167	167	0.0	210	210	0.0
1994	83	83	0.0	268	268	0.0	351	351	0.0
1995	66	66	0.0	221	221	0.0	287	287	0.0
1996	103	103	0.0	337	337	0.0	440	440	0.0
1997	111	111	0.0	297	297	0.0	408	408	0.0
1998	160	160	0.0	432	432	0.0	591	591	0.0
1999	145	145	0.0	360	360	0.0	505	505	0.0
2000	104	104	0.0	268	268	0.0	372	372	0.0
2001	122	122	0.0	302	302	0.0	424	424	0.0
2002	138	138	0.0	341	341	0.0	479	479	0.0
2003	155	155	0.0	382	382	0.0	537	537	0.0
2004	172	172	0.0	425	425	0.0	597	597	0.0
2005	190	95	50.0	467	374	20.0	657	469	28.7
2006	207	103	50.0	510	408	20.0	716	511	28.7
2007	223	112	50.0	551	441	20.0	774	552	28.7
2008	239	120	50.0	590	472	20.0	829	591	28.7
2009	255	128	50.0	630	504	20.0	885	631	28.7
2010	273	136	50.0	672	538	20.0	945	674	28.7
2011	291	146	50.0	718	574	20.0	1,009	720	28.7
2012	311	155	50.0	766	613	20.0	1,077	768	28.7
2013	332	166	50.0	818	654	20.0	1,150	820	28.7
2014	354	177	50.0	873	699	20.0	1,228	876	28.7
2015	378	189	50.0	932	746	20.0	1,311	935	28.7
2016	404	202	50.0	995	796	20.0	1,399	998	28.7
2017	431	215	50.0	1,063	850	20.0	1,494	1,066	28.7
2018	460	230	50.0	1,135	908	20.0	1,595	1,138	28.7
2019	491	246	50.0	1,211	969	20.0	1,703	1,215	28.7
2020	524	262	50.0	1,293	1,035	20.0	1,818	1,297	28.7
2021	560	280	50.0	1,381	1,105	20.0	1,941	1,385	28.7
2022	598	299	50.0	1,474	1,179	20.0	2,072	1,478	28.7
2023	638	319	50.0	1,574	1,259	20.0	2,212	1,578	28.7
2024	681	341	50.0	1,680	1,344	20.0	2,362	1,685	28.7
2025	727	364	50.0	1,794	1,435	20.0	2,521	1,799	28.7

Table D38
Mexico - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	46	46	0.0	264	264	0.0	310	310	0.0
1985	50	50	0.0	287	287	0.0	337	337	0.0
1986	53	53	0.0	302	302	0.0	354	354	0.0
1987	53	53	0.0	303	303	0.0	356	356	0.0
1988	55	55	0.0	306	306	0.0	362	362	0.0
1989	63	63	0.0	329	329	0.0	391	391	0.0
1990	70	70	0.0	352	352	0.0	422	422	0.0
1991	80	80	0.0	382	382	0.0	462	462	0.0
1992	100	100	0.0	451	451	0.0	551	551	0.0
1993	136	136	0.0	581	581	0.0	717	717	0.0
1994	208	208	0.0	803	803	0.0	1,011	1,011	0.0
1995	257	257	0.0	960	960	0.0	1,217	1,217	0.0
1996	340	340	0.0	1,220	1,220	0.0	1,559	1,559	0.0
1997	423	423	0.0	1,420	1,420	0.0	1,843	1,843	0.0
1998	549	549	0.0	1,738	1,738	0.0	2,287	2,287	0.0
1999	650	650	0.0	1,959	1,959	0.0	2,609	2,609	0.0
2000	702	702	0.0	2,070	2,070	0.0	2,772	2,772	0.0
2001	768	768	0.0	2,206	2,206	0.0	2,974	2,974	0.0
2002	845	845	0.0	2,371	2,371	0.0	3,216	3,216	0.0
2003	932	932	0.0	2,564	2,564	0.0	3,496	3,496	0.0
2004	1,030	1,030	0.0	2,783	2,783	0.0	3,813	3,813	0.0
2005	1,137	1,042	8.3	3,028	2,934	3.1	4,165	3,976	4.5
2006	1,253	1,062	15.2	3,295	3,107	5.7	4,548	4,169	8.3
2007	1,376	1,089	20.9	3,582	3,299	7.9	4,958	4,388	11.5
2008	1,505	1,121	25.5	3,886	3,507	9.7	5,390	4,629	14.1
2009	1,640	1,159	29.3	4,204	3,730	11.3	5,844	4,890	16.3
2010	1,781	1,203	32.5	4,540	3,970	12.6	6,322	5,173	18.2
2011	1,930	1,252	35.1	4,895	4,226	13.7	6,825	5,478	19.7
2012	2,086	1,307	37.3	5,269	4,501	14.6	7,356	5,808	21.0
2013	2,251	1,369	39.2	5,666	4,796	15.4	7,917	6,164	22.1
2014	2,425	1,436	40.8	6,086	5,111	16.0	8,511	6,547	23.1
2015	2,609	1,510	42.1	6,532	5,448	16.6	9,141	6,958	23.9
2016	2,804	1,591	43.2	7,004	5,808	17.1	9,809	7,400	24.6
2017	3,011	1,680	44.2	7,507	6,194	17.5	10,518	7,873	25.1
2018	3,230	1,775	45.0	8,041	6,606	17.8	11,271	8,381	25.6
2019	3,463	1,879	45.7	8,609	7,047	18.1	12,072	8,926	26.1
2020	3,710	1,991	46.3	9,214	7,518	18.4	12,924	9,508	26.4
2021	3,973	2,111	46.9	9,857	8,021	18.6	13,831	10,132	26.7
2022	4,253	2,241	47.3	10,543	8,558	18.8	14,796	10,800	27.0
2023	4,551	2,381	47.7	11,273	9,133	19.0	15,825	11,514	27.2
2024	4,869	2,531	48.0	12,052	9,746	19.1	16,920	12,278	27.4
2025	5,207	2,693	48.3	12,881	10,402	19.2	18,088	13,094	27.6

Table D39
Netherlands - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	47	47	0.0	95	95	0.0	142	142	0.0
1986	6	6	0.0	135	135	0.0	142	142	0.0
1987	31	31	0.0	110	110	0.0	141	141	0.0
1988	75	75	0.0	134	134	0.0	210	210	0.0
1989	16	16	0.0	157	157	0.0	173	173	0.0
1990	50	50	0.0	114	114	0.0	164	164	0.0
1991	19	19	0.0	107	107	0.0	126	126	0.0
1992	46	46	0.0	187	187	0.0	233	233	0.0
1993	47	47	0.0	114	114	0.0	161	161	0.0
1994	24	24	0.0	183	183	0.0	207	207	0.0
1995	98	98	0.0	204	204	0.0	302	302	0.0
1996	76	76	0.0	129	129	0.0	205	205	0.0
1997	54	54	0.0	97	97	0.0	152	152	0.0
1998	70	70	0.0	163	163	0.0	233	233	0.0
1999	52	52	0.0	85	85	0.0	137	137	0.0
2000	42	42	0.0	94	94	0.0	136	136	0.0
2001	37	37	0.0	99	99	0.0	136	136	0.0
2002	38	38	0.0	97	97	0.0	135	135	0.0
2003	38	38	0.0	97	97	0.0	135	135	0.0
2004	38	38	0.0	96	96	0.0	135	135	0.0
2005	38	19	50.0	96	77	20.0	134	96	28.5
2006	38	19	50.0	96	77	20.0	134	96	28.5
2007	38	19	50.0	95	76	20.0	133	95	28.5
2008	38	19	50.0	95	76	20.0	133	95	28.5
2009	38	19	50.0	95	76	20.0	133	95	28.5
2010	38	19	50.0	95	76	20.0	132	95	28.5
2011	38	19	50.0	94	76	20.0	132	94	28.5
2012	37	19	50.0	94	75	20.0	132	94	28.5
2013	37	19	50.0	94	75	20.0	131	94	28.5
2014	37	19	50.0	94	75	20.0	131	93	28.5
2015	37	19	50.0	93	75	20.0	130	93	28.5
2016	37	18	50.0	93	74	20.0	130	93	28.5
2017	37	18	50.0	93	74	20.0	130	93	28.5
2018	37	18	50.0	93	74	20.0	129	92	28.5
2019	37	18	50.0	92	74	20.0	129	92	28.5
2020	37	18	50.0	92	74	20.0	129	92	28.5
2021	36	18	50.0	92	73	20.0	128	92	28.5
2022	36	18	50.0	91	73	20.0	128	91	28.5
2023	36	18	50.0	91	73	20.0	127	91	28.5
2024	36	18	50.0	91	73	20.0	127	91	28.5
2025	36	18	50.0	91	73	20.0	127	91	28.5

Table D40
Netherlands - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	284	284	0.0	568	568	0.0	853	853	0.0
1985	309	309	0.0	618	618	0.0	926	926	0.0
1986	291	291	0.0	704	704	0.0	994	994	0.0
1987	298	298	0.0	757	757	0.0	1,056	1,056	0.0
1988	350	350	0.0	831	831	0.0	1,181	1,181	0.0
1989	338	338	0.0	921	921	0.0	1,259	1,259	0.0
1990	361	361	0.0	962	962	0.0	1,322	1,322	0.0
1991	351	351	0.0	991	991	0.0	1,343	1,343	0.0
1992	369	369	0.0	1,099	1,099	0.0	1,468	1,468	0.0
1993	386	386	0.0	1,125	1,125	0.0	1,511	1,511	0.0
1994	379	379	0.0	1,218	1,218	0.0	1,597	1,597	0.0
1995	447	447	0.0	1,324	1,324	0.0	1,771	1,771	0.0
1996	488	488	0.0	1,346	1,346	0.0	1,834	1,834	0.0
1997	503	503	0.0	1,336	1,336	0.0	1,839	1,839	0.0
1998	533	533	0.0	1,393	1,393	0.0	1,925	1,925	0.0
1999	542	542	0.0	1,366	1,366	0.0	1,908	1,908	0.0
2000	541	541	0.0	1,351	1,351	0.0	1,891	1,891	0.0
2001	534	534	0.0	1,341	1,341	0.0	1,876	1,876	0.0
2002	530	530	0.0	1,331	1,331	0.0	1,861	1,861	0.0
2003	526	526	0.0	1,321	1,321	0.0	1,847	1,847	0.0
2004	522	522	0.0	1,312	1,312	0.0	1,834	1,834	0.0
2005	519	499	3.7	1,303	1,284	1.5	1,821	1,783	2.1
2006	515	479	7.1	1,294	1,257	2.8	1,809	1,736	4.1
2007	512	459	10.3	1,286	1,233	4.1	1,798	1,692	5.9
2008	509	441	13.2	1,279	1,211	5.3	1,787	1,652	7.6
2009	506	425	16.0	1,271	1,190	6.4	1,777	1,615	9.1
2010	503	410	18.5	1,264	1,170	7.4	1,767	1,580	10.6
2011	500	396	20.9	1,257	1,152	8.4	1,758	1,548	11.9
2012	498	383	23.1	1,251	1,135	9.2	1,749	1,518	13.2
2013	495	371	25.1	1,245	1,120	10.0	1,740	1,490	14.3
2014	493	360	27.0	1,239	1,105	10.8	1,731	1,465	15.4
2015	490	350	28.7	1,233	1,091	11.5	1,723	1,441	16.4
2016	488	340	30.3	1,227	1,078	12.1	1,715	1,418	17.3
2017	486	331	31.8	1,222	1,066	12.7	1,708	1,398	18.2
2018	484	323	33.2	1,217	1,055	13.3	1,700	1,378	19.0
2019	482	316	34.5	1,212	1,044	13.8	1,693	1,360	19.7
2020	480	309	35.7	1,207	1,034	14.3	1,686	1,343	20.4
2021	478	302	36.8	1,202	1,025	14.7	1,680	1,327	21.0
2022	476	296	37.8	1,197	1,016	15.1	1,673	1,312	21.6
2023	474	291	38.7	1,193	1,008	15.5	1,667	1,298	22.1
2024	472	285	39.6	1,188	1,000	15.8	1,660	1,285	22.6
2025	471	281	40.4	1,184	993	16.2	1,654	1,273	23.0

Table D41
Peru - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	5	5	0.0	28	28	0.0	33	33	0.0
1986	5	5	0.0	26	26	0.0	30	30	0.0
1987	5	5	0.0	23	23	0.0	28	28	0.0
1988	5	5	0.0	21	21	0.0	25	25	0.0
1989	1	1	0.0	4	4	0.0	5	5	0.0
1990	1	1	0.0	3	3	0.0	4	4	0.0
1991	2	2	0.0	8	8	0.0	10	10	0.0
1992	2	2	0.0	6	6	0.0	8	8	0.0
1993	3	3	0.0	11	11	0.0	14	14	0.0
1994	6	6	0.0	18	18	0.0	24	24	0.0
1995	3	3	0.0	9	9	0.0	12	12	0.0
1996	1	1	0.0	2	2	0.0	3	3	0.0
1997	3	3	0.0	8	8	0.0	12	12	0.0
1998	3	3	0.0	8	8	0.0	11	11	0.0
1999	3	3	0.0	7	7	0.0	10	10	0.0
2000	3	3	0.0	7	7	0.0	10	10	0.0
2001	3	3	0.0	7	7	0.0	9	9	0.0
2002	3	3	0.0	6	6	0.0	9	9	0.0
2003	2	2	0.0	6	6	0.0	9	9	0.0
2004	2	2	0.0	6	6	0.0	8	8	0.0
2005	2	1	50.0	6	5	20.0	8	6	28.7
2006	2	1	50.0	6	5	20.0	9	6	28.7
2007	2	1	50.0	6	5	20.0	9	6	28.7
2008	3	1	50.0	6	5	20.0	9	6	28.7
2009	3	1	50.0	7	5	20.0	9	7	28.7
2010	3	1	50.0	7	5	20.0	10	7	28.7
2011	3	1	50.0	7	6	20.0	10	7	28.7
2012	3	2	50.0	8	6	20.0	11	8	28.7
2013	3	2	50.0	8	7	20.0	12	8	28.7
2014	4	2	50.0	9	7	20.0	12	9	28.7
2015	4	2	50.0	9	8	20.0	13	9	28.7
2016	4	2	50.0	10	8	20.0	14	10	28.7
2017	4	2	50.0	11	9	20.0	15	11	28.7
2018	5	2	50.0	11	9	20.0	16	11	28.7
2019	5	2	50.0	12	10	20.0	17	12	28.7
2020	5	3	50.0	13	10	20.0	18	13	28.7
2021	6	3	50.0	14	11	20.0	20	14	28.7
2022	6	3	50.0	15	12	20.0	21	15	28.7
2023	6	3	50.0	16	13	20.0	22	16	28.7
2024	7	3	50.0	17	14	20.0	24	17	28.7
2025	7	4	50.0	18	14	20.0	25	18	28.7

Table D42
Peru - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	29	29	0.0	169	169	0.0	199	199	0.0
1985	32	32	0.0	184	184	0.0	216	216	0.0
1986	34	34	0.0	195	195	0.0	229	229	0.0
1987	36	36	0.0	202	202	0.0	238	238	0.0
1988	38	38	0.0	207	207	0.0	245	245	0.0
1989	36	36	0.0	195	195	0.0	231	231	0.0
1990	34	34	0.0	182	182	0.0	216	216	0.0
1991	33	33	0.0	176	176	0.0	209	209	0.0
1992	32	32	0.0	168	168	0.0	200	200	0.0
1993	32	32	0.0	165	165	0.0	197	197	0.0
1994	35	35	0.0	170	170	0.0	205	205	0.0
1995	35	35	0.0	166	166	0.0	201	201	0.0
1996	33	33	0.0	155	155	0.0	188	188	0.0
1997	34	34	0.0	151	151	0.0	184	184	0.0
1998	34	34	0.0	146	146	0.0	180	180	0.0
1999	34	34	0.0	142	142	0.0	176	176	0.0
2000	34	34	0.0	137	137	0.0	171	171	0.0
2001	34	34	0.0	133	133	0.0	167	167	0.0
2002	34	34	0.0	129	129	0.0	162	162	0.0
2003	33	33	0.0	124	124	0.0	158	158	0.0
2004	33	33	0.0	121	121	0.0	154	154	0.0
2005	33	32	3.7	117	116	1.0	150	148	1.6
2006	33	31	7.2	114	111	2.0	146	142	3.2
2007	33	29	10.4	111	107	3.0	143	137	4.7
2008	33	28	13.5	108	104	4.0	141	132	6.2
2009	33	27	16.5	106	101	5.0	139	128	7.7
2010	33	27	19.3	104	98	6.0	137	125	9.2
2011	33	26	22.0	103	96	7.0	137	122	10.6
2012	34	25	24.6	103	95	8.0	136	120	12.1
2013	34	25	27.1	103	94	8.9	137	119	13.5
2014	35	25	29.4	103	93	9.9	139	118	14.8
2015	36	25	31.6	105	93	10.8	141	118	16.1
2016	37	25	33.6	106	94	11.7	144	119	17.4
2017	39	25	35.5	108	95	12.5	147	120	18.5
2018	40	25	37.1	111	96	13.3	151	122	19.6
2019	42	26	38.7	115	99	14.0	156	124	20.6
2020	44	26	40.0	118	101	14.6	162	127	21.5
2021	46	27	41.2	123	104	15.2	169	131	22.3
2022	48	28	42.3	128	108	15.8	176	136	23.1
2023	51	29	43.3	134	112	16.3	184	141	23.8
2024	54	30	44.2	140	116	16.7	194	146	24.4
2025	57	31	44.9	147	122	17.1	203	153	24.9

Table D43
Portugal - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	2	2	0.0	11	11	0.0	13	13	0.0
1986	2	2	0.0	13	13	0.0	15	15	0.0
1987	3	3	0.0	14	14	0.0	17	17	0.0
1988	3	3	0.0	15	15	0.0	18	18	0.0
1989	5	5	0.0	18	18	0.0	23	23	0.0
1990	7	7	0.0	26	26	0.0	33	33	0.0
1991	9	9	0.0	34	34	0.0	44	44	0.0
1992	12	12	0.0	45	45	0.0	57	57	0.0
1993	9	9	0.0	36	36	0.0	45	45	0.0
1994	11	11	0.0	35	35	0.0	46	46	0.0
1995	11	11	0.0	38	38	0.0	49	49	0.0
1996	7	7	0.0	22	22	0.0	28	28	0.0
1997	18	18	0.0	48	48	0.0	66	66	0.0
1998	14	14	0.0	38	38	0.0	53	53	0.0
1999	17	17	0.0	42	42	0.0	58	58	0.0
2000	18	18	0.0	46	46	0.0	64	64	0.0
2001	20	20	0.0	50	50	0.0	70	70	0.0
2002	22	22	0.0	54	54	0.0	76	76	0.0
2003	23	23	0.0	58	58	0.0	81	81	0.0
2004	25	25	0.0	62	62	0.0	87	87	0.0
2005	27	13	50.0	66	53	20.0	92	66	28.7
2006	28	14	50.0	70	56	20.0	99	70	28.7
2007	30	15	50.0	75	60	20.0	105	75	28.7
2008	32	16	50.0	80	64	20.0	113	80	28.7
2009	35	17	50.0	85	68	20.0	120	86	28.7
2010	37	19	50.0	91	73	20.0	128	92	28.7
2011	40	20	50.0	97	78	20.0	137	98	28.7
2012	42	21	50.0	104	83	20.0	146	104	28.7
2013	45	23	50.0	111	89	20.0	156	111	28.7
2014	48	24	50.0	119	95	20.0	167	119	28.7
2015	51	26	50.0	127	101	20.0	178	127	28.7
2016	55	27	50.0	135	108	20.0	190	136	28.7
2017	59	29	50.0	144	115	20.0	203	145	28.7
2018	62	31	50.0	154	123	20.0	216	154	28.7
2019	67	33	50.0	164	132	20.0	231	165	28.7
2020	71	36	50.0	176	140	20.0	247	176	28.7
2021	76	38	50.0	187	150	20.0	263	188	28.7
2022	81	41	50.0	200	160	20.0	281	201	28.7
2023	87	43	50.0	214	171	20.0	300	214	28.7
2024	92	46	50.0	228	182	20.0	321	229	28.7
2025	99	49	50.0	244	195	20.0	342	244	28.7

Table D44
Portugal - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	12	12	0.0	69	69	0.0	81	81	0.0
1985	13	13	0.0	75	75	0.0	88	88	0.0
1986	14	14	0.0	81	81	0.0	95	95	0.0
1987	16	16	0.0	89	89	0.0	104	104	0.0
1988	18	18	0.0	97	97	0.0	114	114	0.0
1989	21	21	0.0	107	107	0.0	128	128	0.0
1990	26	26	0.0	124	124	0.0	150	150	0.0
1991	33	33	0.0	149	149	0.0	182	182	0.0
1992	42	42	0.0	182	182	0.0	224	224	0.0
1993	48	48	0.0	203	203	0.0	251	251	0.0
1994	55	55	0.0	222	222	0.0	277	277	0.0
1995	62	62	0.0	242	242	0.0	304	304	0.0
1996	64	64	0.0	244	244	0.0	308	308	0.0
1997	77	77	0.0	273	273	0.0	350	350	0.0
1998	85	85	0.0	290	290	0.0	374	374	0.0
1999	95	95	0.0	308	308	0.0	403	403	0.0
2000	105	105	0.0	330	330	0.0	435	435	0.0
2001	117	117	0.0	353	353	0.0	470	470	0.0
2002	129	129	0.0	379	379	0.0	508	508	0.0
2003	142	142	0.0	406	406	0.0	549	549	0.0
2004	156	156	0.0	435	435	0.0	592	592	0.0
2005	170	157	7.8	466	453	2.8	637	610	4.2
2006	185	159	14.3	499	473	5.2	684	632	7.7
2007	201	161	19.7	534	495	7.3	735	656	10.7
2008	217	164	24.3	572	520	9.1	789	684	13.3
2009	234	169	28.1	611	547	10.6	846	715	15.4
2010	253	174	31.3	654	576	11.9	906	749	17.3
2011	272	180	34.0	699	608	13.0	971	787	18.9
2012	292	186	36.3	747	642	14.0	1,039	829	20.3
2013	314	194	38.3	798	680	14.8	1,112	874	21.5
2014	337	202	39.9	853	720	15.6	1,190	923	22.5
2015	361	212	41.4	911	764	16.2	1,273	976	23.3
2016	387	222	42.6	974	811	16.7	1,361	1,033	24.1
2017	415	234	43.6	1,040	861	17.2	1,455	1,095	24.7
2018	444	246	44.5	1,111	916	17.6	1,555	1,162	25.3
2019	475	260	45.3	1,186	974	17.9	1,662	1,234	25.7
2020	508	275	46.0	1,267	1,037	18.2	1,775	1,311	26.1
2021	544	291	46.5	1,353	1,104	18.4	1,897	1,394	26.5
2022	581	308	47.0	1,445	1,175	18.7	2,026	1,483	26.8
2023	622	327	47.4	1,543	1,252	18.8	2,165	1,579	27.0
2024	664	347	47.8	1,648	1,335	19.0	2,312	1,681	27.3
2025	710	368	48.1	1,759	1,423	19.1	2,469	1,791	27.5

Table D45
Singapore - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	2	2	0.0	14	14	0.0	17	17	0.0
1986	3	3	0.0	16	16	0.0	19	19	0.0
1987	4	4	0.0	18	18	0.0	21	21	0.0
1988	4	4	0.0	20	20	0.0	24	24	0.0
1989	5	5	0.0	21	21	0.0	27	27	0.0
1990	6	6	0.0	22	22	0.0	28	28	0.0
1991	6	6	0.0	22	22	0.0	28	28	0.0
1992	5	5	0.0	20	20	0.0	26	26	0.0
1993	4	4	0.0	15	15	0.0	19	19	0.0
1994	6	6	0.0	21	21	0.0	27	27	0.0
1995	22	22	0.0	74	74	0.0	96	96	0.0
1996	10	10	0.0	32	32	0.0	42	42	0.0
1997	35	35	0.0	93	93	0.0	128	128	0.0
1998	7	7	0.0	20	20	0.0	28	28	0.0
1999	12	12	0.0	31	31	0.0	43	43	0.0
2000	27	27	0.0	71	71	0.0	98	98	0.0
2001	32	32	0.0	79	79	0.0	111	111	0.0
2002	36	36	0.0	88	88	0.0	123	123	0.0
2003	39	39	0.0	97	97	0.0	136	136	0.0
2004	43	43	0.0	106	106	0.0	149	149	0.0
2005	47	23	50.0	115	92	20.0	162	116	28.7
2006	50	25	50.0	124	99	20.0	174	124	28.7
2007	54	27	50.0	132	106	20.0	186	133	28.7
2008	57	29	50.0	141	113	20.0	199	142	28.7
2009	61	31	50.0	151	121	20.0	212	151	28.7
2010	65	33	50.0	161	129	20.0	226	162	28.7
2011	70	35	50.0	172	138	20.0	242	173	28.7
2012	74	37	50.0	184	147	20.0	258	184	28.7
2013	80	40	50.0	196	157	20.0	276	197	28.7
2014	85	42	50.0	209	167	20.0	294	210	28.7
2015	91	45	50.0	224	179	20.0	314	224	28.7
2016	97	48	50.0	239	191	20.0	335	239	28.7
2017	103	52	50.0	255	204	20.0	358	255	28.7
2018	110	55	50.0	272	218	20.0	382	273	28.7
2019	118	59	50.0	290	232	20.0	408	291	28.7
2020	126	63	50.0	310	248	20.0	436	311	28.7
2021	134	67	50.0	331	265	20.0	465	332	28.7
2022	143	72	50.0	353	283	20.0	497	354	28.7
2023	153	76	50.0	377	302	20.0	530	378	28.7
2024	163	82	50.0	403	322	20.0	566	404	28.7
2025	174	87	50.0	430	344	20.0	604	431	28.7

Table D46
Singapore - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	15	15	0.0	86	86	0.0	101	101	0.0
1985	16	16	0.0	93	93	0.0	109	109	0.0
1986	18	18	0.0	102	102	0.0	119	119	0.0
1987	20	20	0.0	111	111	0.0	131	131	0.0
1988	23	23	0.0	122	122	0.0	145	145	0.0
1989	26	26	0.0	134	134	0.0	160	160	0.0
1990	30	30	0.0	145	145	0.0	175	175	0.0
1991	33	33	0.0	156	156	0.0	189	189	0.0
1992	36	36	0.0	164	164	0.0	200	200	0.0
1993	37	37	0.0	166	166	0.0	203	203	0.0
1994	41	41	0.0	173	173	0.0	214	214	0.0
1995	59	59	0.0	233	233	0.0	292	292	0.0
1996	64	64	0.0	246	246	0.0	311	311	0.0
1997	94	94	0.0	320	320	0.0	414	414	0.0
1998	94	94	0.0	314	314	0.0	408	408	0.0
1999	99	99	0.0	320	320	0.0	419	419	0.0
2000	118	118	0.0	365	365	0.0	484	484	0.0
2001	141	141	0.0	415	415	0.0	556	556	0.0
2002	165	165	0.0	470	470	0.0	635	635	0.0
2003	191	191	0.0	529	529	0.0	720	720	0.0
2004	219	219	0.0	593	593	0.0	812	812	0.0
2005	248	225	9.4	661	638	3.5	909	863	5.1
2006	279	232	16.7	732	686	6.3	1,011	918	9.2
2007	310	240	22.5	806	737	8.5	1,116	977	12.4
2008	343	250	27.1	883	791	10.4	1,225	1,041	15.1
2009	376	260	30.8	963	849	11.9	1,340	1,109	17.2
2010	412	272	33.9	1,047	910	13.1	1,459	1,182	19.0
2011	448	285	36.4	1,135	975	14.2	1,584	1,260	20.5
2012	487	300	38.5	1,228	1,044	15.0	1,715	1,343	21.7
2013	528	316	40.2	1,326	1,117	15.8	1,854	1,432	22.7
2014	570	333	41.7	1,429	1,195	16.4	2,000	1,528	23.6
2015	615	351	42.9	1,539	1,278	16.9	2,154	1,630	24.3
2016	663	372	43.9	1,654	1,367	17.4	2,317	1,739	25.0
2017	713	394	44.8	1,776	1,461	17.7	2,490	1,855	25.5
2018	766	417	45.6	1,906	1,562	18.1	2,673	1,979	25.9
2019	823	443	46.2	2,044	1,669	18.3	2,867	2,112	26.3
2020	883	470	46.7	2,191	1,784	18.6	3,073	2,254	26.7
2021	946	500	47.2	2,346	1,906	18.8	3,293	2,406	26.9
2022	1,014	531	47.6	2,512	2,036	18.9	3,526	2,567	27.2
2023	1,086	565	47.9	2,688	2,175	19.1	3,774	2,740	27.4
2024	1,162	602	48.2	2,876	2,323	19.2	4,038	2,925	27.6
2025	1,244	641	48.5	3,076	2,481	19.3	4,320	3,122	27.7

Table D47
Spain - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	-	-	0.0	98	98	0.0	98	98	0.0
1986	-	-	0.0	104	104	0.0	104	104	0.0
1987	10	10	0.0	101	101	0.0	111	111	0.0
1988	8	8	0.0	109	109	0.0	118	118	0.0
1989	14	14	0.0	202	202	0.0	217	217	0.0
1990	20	20	0.0	244	244	0.0	264	264	0.0
1991	33	33	0.0	333	333	0.0	366	366	0.0
1992	19	19	0.0	328	328	0.0	347	347	0.0
1993	36	36	0.0	271	271	0.0	308	308	0.0
1994	18	18	0.0	273	273	0.0	291	291	0.0
1995	53	53	0.0	316	316	0.0	368	368	0.0
1996	52	52	0.0	275	275	0.0	326	326	0.0
1997	122	122	0.0	195	195	0.0	316	316	0.0
1998	62	62	0.0	133	133	0.0	195	195	0.0
1999	61	61	0.0	210	210	0.0	271	271	0.0
2000	100	100	0.0	151	151	0.0	251	251	0.0
2001	28	28	0.0	240	240	0.0	268	268	0.0
2002	99	99	0.0	186	186	0.0	285	285	0.0
2003	106	106	0.0	198	198	0.0	304	304	0.0
2004	112	112	0.0	211	211	0.0	323	323	0.0
2005	120	60	50.0	225	180	20.0	344	240	30.4
2006	128	64	50.0	239	191	20.0	367	255	30.4
2007	136	68	50.0	255	204	20.0	391	272	30.4
2008	145	72	50.0	271	217	20.0	416	289	30.4
2009	154	77	50.0	289	231	20.0	443	308	30.4
2010	164	82	50.0	308	246	20.0	472	328	30.4
2011	175	87	50.0	328	262	20.0	503	350	30.4
2012	186	93	50.0	349	279	20.0	535	372	30.4
2013	198	99	50.0	372	298	20.0	570	397	30.4
2014	211	106	50.0	396	317	20.0	607	423	30.4
2015	225	113	50.0	422	338	20.0	647	450	30.4
2016	240	120	50.0	449	360	20.0	689	479	30.4
2017	255	128	50.0	479	383	20.0	734	511	30.4
2018	272	136	50.0	510	408	20.0	782	544	30.4
2019	290	145	50.0	543	434	20.0	833	579	30.4
2020	308	154	50.0	578	463	20.0	887	617	30.4
2021	329	164	50.0	616	493	20.0	944	657	30.4
2022	350	175	50.0	656	525	20.0	1,006	700	30.4
2023	373	186	50.0	699	559	20.0	1,071	745	30.4
2024	397	198	50.0	744	595	20.0	1,141	794	30.4
2025	423	211	50.0	793	634	20.0	1,215	846	30.4

Table D48
Spain - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	-	-	0.0	585	585	0.0	585	585	0.0
1985	-	-	0.0	636	636	0.0	636	636	0.0
1986	-	-	0.0	689	689	0.0	689	689	0.0
1987	10	10	0.0	735	735	0.0	745	745	0.0
1988	18	18	0.0	785	785	0.0	803	803	0.0
1989	31	31	0.0	925	925	0.0	955	955	0.0
1990	49	49	0.0	1,094	1,094	0.0	1,143	1,143	0.0
1991	78	78	0.0	1,340	1,340	0.0	1,418	1,418	0.0
1992	91	91	0.0	1,561	1,561	0.0	1,652	1,652	0.0
1993	120	120	0.0	1,707	1,707	0.0	1,827	1,827	0.0
1994	129	129	0.0	1,843	1,843	0.0	1,972	1,972	0.0
1995	171	171	0.0	2,012	2,012	0.0	2,182	2,182	0.0
1996	209	209	0.0	2,125	2,125	0.0	2,334	2,334	0.0
1997	314	314	0.0	2,150	2,150	0.0	2,464	2,464	0.0
1998	351	351	0.0	2,111	2,111	0.0	2,461	2,461	0.0
1999	384	384	0.0	2,152	2,152	0.0	2,536	2,536	0.0
2000	454	454	0.0	2,131	2,131	0.0	2,584	2,584	0.0
2001	445	445	0.0	2,200	2,200	0.0	2,645	2,645	0.0
2002	508	508	0.0	2,210	2,210	0.0	2,718	2,718	0.0
2003	573	573	0.0	2,231	2,231	0.0	2,804	2,804	0.0
2004	640	640	0.0	2,263	2,263	0.0	2,903	2,903	0.0
2005	709	649	8.5	2,307	2,262	1.9	3,015	2,911	3.5
2006	779	661	15.3	2,362	2,272	3.8	3,141	2,933	6.6
2007	853	676	20.8	2,427	2,294	5.5	3,280	2,970	9.5
2008	929	694	25.3	2,505	2,328	7.1	3,434	3,022	12.0
2009	1,009	715	29.1	2,593	2,373	8.5	3,602	3,088	14.3
2010	1,093	740	32.2	2,694	2,429	9.8	3,786	3,170	16.3
2011	1,180	769	34.9	2,806	2,497	11.0	3,986	3,266	18.1
2012	1,272	800	37.1	2,931	2,577	12.1	4,203	3,377	19.6
2013	1,369	835	39.0	3,068	2,668	13.0	4,437	3,504	21.0
2014	1,470	874	40.5	3,219	2,772	13.9	4,689	3,646	22.2
2015	1,578	917	41.9	3,383	2,887	14.7	4,961	3,804	23.3
2016	1,691	963	43.0	3,562	3,016	15.3	5,253	3,979	24.3
2017	1,811	1,014	44.0	3,756	3,158	15.9	5,567	4,171	25.1
2018	1,938	1,069	44.9	3,965	3,313	16.4	5,903	4,381	25.8
2019	2,073	1,128	45.6	4,191	3,482	16.9	6,263	4,610	26.4
2020	2,215	1,192	46.2	4,434	3,666	17.3	6,649	4,858	26.9
2021	2,367	1,261	46.7	4,695	3,866	17.7	7,062	5,127	27.4
2022	2,527	1,335	47.2	4,976	4,081	18.0	7,503	5,416	27.8
2023	2,698	1,414	47.6	5,276	4,314	18.2	7,974	5,728	28.2
2024	2,879	1,500	47.9	5,598	4,564	18.5	8,477	6,064	28.5
2025	3,071	1,591	48.2	5,943	4,833	18.7	9,015	6,424	28.7

Table D49
Sweden - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	1	1	0.0	4	4	0.0	4	4	0.0
1986	1	1	0.0	5	5	0.0	6	6	0.0
1987	2	2	0.0	7	7	0.0	9	9	0.0
1988	4	4	0.0	10	10	0.0	13	13	0.0
1989	5	5	0.0	15	15	0.0	20	20	0.0
1990	9	9	0.0	19	19	0.0	28	28	0.0
1991	7	7	0.0	34	34	0.0	41	41	0.0
1992	9	9	0.0	50	50	0.0	60	60	0.0
1993	31	31	0.0	55	55	0.0	86	86	0.0
1994	15	15	0.0	110	110	0.0	125	125	0.0
1995	46	46	0.0	135	135	0.0	182	182	0.0
1996	37	37	0.0	226	226	0.0	263	263	0.0
1997	104	104	0.0	278	278	0.0	382	382	0.0
1998	162	162	0.0	391	391	0.0	553	553	0.0
1999	154	154	0.0	648	648	0.0	802	802	0.0
2000	272	272	0.0	666	666	0.0	938	938	0.0
2001	248	248	0.0	841	841	0.0	1,089	1,089	0.0
2002	282	282	0.0	970	970	0.0	1,252	1,252	0.0
2003	322	322	0.0	1,106	1,106	0.0	1,427	1,427	0.0
2004	363	363	0.0	1,249	1,249	0.0	1,613	1,613	0.0
2005	407	204	50.0	1,399	1,119	20.0	1,806	1,323	26.8
2006	452	226	50.0	1,553	1,242	20.0	2,005	1,468	26.8
2007	497	248	50.0	1,708	1,367	20.0	2,205	1,615	26.8
2008	542	271	50.0	1,862	1,490	20.0	2,404	1,761	26.8
2009	585	293	50.0	2,011	1,609	20.0	2,596	1,901	26.8
2010	626	313	50.0	2,152	1,722	20.0	2,778	2,035	26.8
2011	668	334	50.0	2,297	1,838	20.0	2,966	2,172	26.8
2012	714	357	50.0	2,453	1,962	20.0	3,166	2,319	26.8
2013	762	381	50.0	2,619	2,095	20.0	3,380	2,476	26.8
2014	813	407	50.0	2,796	2,237	20.0	3,609	2,643	26.8
2015	868	434	50.0	2,985	2,388	20.0	3,853	2,822	26.8
2016	927	464	50.0	3,187	2,549	20.0	4,114	3,013	26.8
2017	990	495	50.0	3,402	2,722	20.0	4,392	3,217	26.8
2018	1,057	528	50.0	3,632	2,906	20.0	4,689	3,434	26.8
2019	1,128	564	50.0	3,878	3,102	20.0	5,006	3,666	26.8
2020	1,204	602	50.0	4,140	3,312	20.0	5,344	3,914	26.8
2021	1,286	643	50.0	4,420	3,536	20.0	5,706	4,179	26.8
2022	1,373	686	50.0	4,719	3,775	20.0	6,092	4,462	26.8
2023	1,466	733	50.0	5,038	4,030	20.0	6,504	4,763	26.8
2024	1,565	782	50.0	5,379	4,303	20.0	6,943	5,085	26.8
2025	1,671	835	50.0	5,742	4,594	20.0	7,413	5,429	26.8

Table D50
Sweden - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	4	4	0.0	22	22	0.0	27	27	0.0
1985	5	5	0.0	24	24	0.0	29	29	0.0
1986	6	6	0.0	27	27	0.0	33	33	0.0
1987	7	7	0.0	32	32	0.0	40	40	0.0
1988	10	10	0.0	40	40	0.0	50	50	0.0
1989	14	14	0.0	52	52	0.0	66	66	0.0
1990	22	22	0.0	67	67	0.0	89	89	0.0
1991	27	27	0.0	95	95	0.0	123	123	0.0
1992	34	34	0.0	138	138	0.0	172	172	0.0
1993	63	63	0.0	182	182	0.0	245	245	0.0
1994	73	73	0.0	278	278	0.0	351	351	0.0
1995	113	113	0.0	391	391	0.0	504	504	0.0
1996	141	141	0.0	586	586	0.0	727	727	0.0
1997	234	234	0.0	817	817	0.0	1,051	1,051	0.0
1998	377	377	0.0	1,143	1,143	0.0	1,520	1,520	0.0
1999	500	500	0.0	1,700	1,700	0.0	2,200	2,200	0.0
2000	733	733	0.0	2,230	2,230	0.0	2,963	2,963	0.0
2001	922	922	0.0	2,892	2,892	0.0	3,814	3,814	0.0
2002	1,130	1,130	0.0	3,631	3,631	0.0	4,761	4,761	0.0
2003	1,362	1,362	0.0	4,446	4,446	0.0	5,807	5,807	0.0
2004	1,616	1,616	0.0	5,339	5,339	0.0	6,955	6,955	0.0
2005	1,894	1,690	10.7	6,311	6,032	4.4	8,205	7,722	5.9
2006	2,194	1,781	18.8	7,360	6,792	7.7	9,554	8,572	10.3
2007	2,516	1,887	25.0	8,479	7,615	10.2	10,995	9,502	13.6
2008	2,856	2,007	29.7	9,663	8,495	12.1	12,519	10,502	16.1
2009	3,213	2,139	33.4	10,901	9,425	13.5	14,114	11,564	18.1
2010	3,582	2,281	36.3	12,181	10,392	14.7	15,763	12,673	19.6
2011	3,963	2,432	38.6	13,504	11,399	15.6	17,467	13,831	20.8
2012	4,360	2,595	40.5	14,876	12,449	16.3	19,236	15,044	21.8
2013	4,773	2,768	42.0	16,305	13,548	16.9	21,078	16,316	22.6
2014	5,204	2,953	43.3	17,796	14,701	17.4	23,001	17,654	23.2
2015	5,656	3,151	44.3	19,357	15,913	17.8	25,014	19,064	23.8
2016	6,131	3,362	45.2	20,995	17,189	18.1	27,126	20,551	24.2
2017	6,630	3,588	45.9	22,718	18,535	18.4	29,348	22,124	24.6
2018	7,156	3,830	46.5	24,533	19,958	18.6	31,689	23,788	24.9
2019	7,712	4,087	47.0	26,448	21,464	18.8	34,160	25,551	25.2
2020	8,299	4,362	47.4	28,472	23,059	19.0	36,771	27,421	25.4
2021	8,921	4,656	47.8	30,614	24,750	19.2	39,535	29,407	25.6
2022	9,580	4,970	48.1	32,884	26,545	19.3	42,464	31,516	25.8
2023	10,279	5,305	48.4	35,291	28,452	19.4	45,571	33,758	25.9
2024	11,022	5,663	48.6	37,847	30,479	19.5	48,869	36,142	26.0
2025	11,811	6,046	48.8	40,562	32,635	19.5	52,372	38,680	26.1

Table D51
United Kingdom - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	159	159	0.0	719	719	0.0	878	878	0.0
1986	119	119	0.0	801	801	0.0	920	920	0.0
1987	131	131	0.0	833	833	0.0	963	963	0.0
1988	183	183	0.0	826	826	0.0	1,009	1,009	0.0
1989	190	190	0.0	867	867	0.0	1,057	1,057	0.0
1990	141	141	0.0	966	966	0.0	1,107	1,107	0.0
1991	225	225	0.0	934	934	0.0	1,159	1,159	0.0
1992	230	230	0.0	1,096	1,096	0.0	1,326	1,326	0.0
1993	189	189	0.0	725	725	0.0	914	914	0.0
1994	213	213	0.0	820	820	0.0	1,033	1,033	0.0
1995	266	266	0.0	917	917	0.0	1,183	1,183	0.0
1996	255	255	0.0	737	737	0.0	992	992	0.0
1997	381	381	0.0	932	932	0.0	1,313	1,313	0.0
1998	471	471	0.0	1,242	1,242	0.0	1,713	1,713	0.0
1999	476	476	0.0	1,204	1,204	0.0	1,679	1,679	0.0
2000	419	419	0.0	1,340	1,340	0.0	1,759	1,759	0.0
2001	501	501	0.0	1,341	1,341	0.0	1,842	1,842	0.0
2002	529	529	0.0	1,401	1,401	0.0	1,930	1,930	0.0
2003	554	554	0.0	1,467	1,467	0.0	2,021	2,021	0.0
2004	580	580	0.0	1,537	1,537	0.0	2,117	2,117	0.0
2005	608	304	50.0	1,610	1,288	20.0	2,218	1,592	28.2
2006	637	318	50.0	1,686	1,349	20.0	2,323	1,667	28.2
2007	667	333	50.0	1,766	1,413	20.0	2,433	1,746	28.2
2008	699	349	50.0	1,850	1,480	20.0	2,548	1,829	28.2
2009	732	366	50.0	1,937	1,550	20.0	2,669	1,916	28.2
2010	766	383	50.0	2,029	1,623	20.0	2,796	2,007	28.2
2011	803	401	50.0	2,125	1,700	20.0	2,928	2,102	28.2
2012	841	420	50.0	2,226	1,781	20.0	3,067	2,201	28.2
2013	881	440	50.0	2,332	1,865	20.0	3,212	2,306	28.2
2014	923	461	50.0	2,442	1,954	20.0	3,365	2,415	28.2
2015	966	483	50.0	2,558	2,046	20.0	3,524	2,530	28.2
2016	1,012	506	50.0	2,679	2,144	20.0	3,691	2,650	28.2
2017	1,060	530	50.0	2,806	2,245	20.0	3,866	2,775	28.2
2018	1,110	555	50.0	2,940	2,352	20.0	4,050	2,907	28.2
2019	1,163	581	50.0	3,079	2,463	20.0	4,242	3,045	28.2
2020	1,218	609	50.0	3,225	2,580	20.0	4,443	3,189	28.2
2021	1,276	638	50.0	3,378	2,702	20.0	4,654	3,340	28.2
2022	1,336	668	50.0	3,538	2,830	20.0	4,874	3,499	28.2
2023	1,400	700	50.0	3,706	2,965	20.0	5,106	3,665	28.2
2024	1,466	733	50.0	3,882	3,105	20.0	5,348	3,838	28.2
2025	1,536	768	50.0	4,066	3,252	20.0	5,601	4,020	28.2

Table D52
United Kingdom - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	953	953	0.0	4,314	4,314	0.0	5,268	5,268	0.0
1985	1,036	1,036	0.0	4,688	4,688	0.0	5,724	5,724	0.0
1986	1,072	1,072	0.0	5,114	5,114	0.0	6,186	6,186	0.0
1987	1,116	1,116	0.0	5,538	5,538	0.0	6,654	6,654	0.0
1988	1,210	1,210	0.0	5,921	5,921	0.0	7,130	7,130	0.0
1989	1,303	1,303	0.0	6,314	6,314	0.0	7,617	7,617	0.0
1990	1,339	1,339	0.0	6,775	6,775	0.0	8,114	8,114	0.0
1991	1,457	1,457	0.0	7,167	7,167	0.0	8,624	8,624	0.0
1992	1,571	1,571	0.0	7,689	7,689	0.0	9,260	9,260	0.0
1993	1,635	1,635	0.0	7,799	7,799	0.0	9,434	9,434	0.0
1994	1,717	1,717	0.0	7,995	7,995	0.0	9,712	9,712	0.0
1995	1,846	1,846	0.0	8,272	8,272	0.0	10,118	10,118	0.0
1996	1,953	1,953	0.0	8,347	8,347	0.0	10,301	10,301	0.0
1997	2,178	2,178	0.0	8,611	8,611	0.0	10,789	10,789	0.0
1998	2,474	2,474	0.0	9,164	9,164	0.0	11,638	11,638	0.0
1999	2,752	2,752	0.0	9,635	9,635	0.0	12,387	12,387	0.0
2000	2,951	2,951	0.0	10,204	10,204	0.0	13,155	13,155	0.0
2001	3,216	3,216	0.0	10,729	10,729	0.0	13,945	13,945	0.0
2002	3,487	3,487	0.0	11,272	11,272	0.0	14,759	14,759	0.0
2003	3,763	3,763	0.0	11,837	11,837	0.0	15,600	15,600	0.0
2004	4,042	4,042	0.0	12,427	12,427	0.0	16,469	16,469	0.0
2005	4,327	4,023	7.0	13,042	12,720	2.5	17,369	16,743	3.6
2006	4,617	4,019	13.0	13,685	13,051	4.6	18,302	17,071	6.7
2007	4,915	4,031	18.0	14,356	13,420	6.5	19,271	17,451	9.4
2008	5,220	4,058	22.3	15,057	13,826	8.2	20,277	17,884	11.8
2009	5,534	4,099	25.9	15,790	14,270	9.6	21,324	18,369	13.9
2010	5,858	4,155	29.1	16,555	14,751	10.9	22,414	18,906	15.6
2011	6,192	4,224	31.8	17,356	15,272	12.0	23,549	19,495	17.2
2012	6,538	4,306	34.1	18,194	15,831	13.0	24,732	20,137	18.6
2013	6,896	4,402	36.2	19,070	16,430	13.8	25,966	20,832	19.8
2014	7,266	4,511	37.9	19,987	17,069	14.6	27,253	21,580	20.8
2015	7,651	4,633	39.4	20,946	17,750	15.3	28,597	22,383	21.7
2016	8,051	4,769	40.8	21,950	18,474	15.8	30,001	23,242	22.5
2017	8,467	4,917	41.9	23,000	19,241	16.3	31,467	24,158	23.2
2018	8,900	5,079	42.9	24,100	20,053	16.8	33,000	25,132	23.8
2019	9,351	5,254	43.8	25,251	20,912	17.2	34,602	26,166	24.4
2020	9,821	5,443	44.6	26,455	21,819	17.5	36,277	27,262	24.8
2021	10,311	5,645	45.3	27,717	22,776	17.8	38,028	28,421	25.3
2022	10,823	5,862	45.8	29,038	23,784	18.1	39,860	29,646	25.6
2023	11,357	6,093	46.4	30,420	24,846	18.3	41,777	30,939	25.9
2024	11,914	6,339	46.8	31,868	25,964	18.5	43,783	32,302	26.2
2025	12,497	6,599	47.2	33,384	27,139	18.7	45,881	33,738	26.5

Table D53
United States - Investment Flows
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	578	578	0.0	2,950	2,950	0.0	3,527	3,527	0.0
1986	697	697	0.0	2,908	2,908	0.0	3,605	3,605	0.0
1987	713	713	0.0	2,973	2,973	0.0	3,686	3,686	0.0
1988	797	797	0.0	2,971	2,971	0.0	3,767	3,767	0.0
1989	908	908	0.0	2,943	2,943	0.0	3,851	3,851	0.0
1990	995	995	0.0	2,942	2,942	0.0	3,937	3,937	0.0
1991	1,006	1,006	0.0	3,018	3,018	0.0	4,024	4,024	0.0
1992	973	973	0.0	3,140	3,140	0.0	4,114	4,114	0.0
1993	985	985	0.0	3,250	3,250	0.0	4,234	4,234	0.0
1994	1,169	1,169	0.0	3,109	3,109	0.0	4,278	4,278	0.0
1995	1,166	1,166	0.0	3,456	3,456	0.0	4,623	4,623	0.0
1996	1,166	1,166	0.0	3,583	3,583	0.0	4,748	4,748	0.0
1997	1,353	1,353	0.0	3,524	3,524	0.0	4,877	4,877	0.0
1998	1,262	1,262	0.0	3,230	3,230	0.0	4,492	4,492	0.0
1999	1,421	1,421	0.0	3,377	3,377	0.0	4,797	4,797	0.0
2000	1,418	1,418	0.0	3,486	3,486	0.0	4,904	4,904	0.0
2001	1,445	1,445	0.0	3,567	3,567	0.0	5,013	5,013	0.0
2002	1,468	1,468	0.0	3,656	3,656	0.0	5,124	5,124	0.0
2003	1,501	1,501	0.0	3,737	3,737	0.0	5,238	5,238	0.0
2004	1,534	1,534	0.0	3,820	3,820	0.0	5,354	5,354	0.0
2005	1,568	784	50.0	3,905	3,124	20.0	5,473	3,908	28.6
2006	1,603	801	50.0	3,992	3,194	20.0	5,595	3,995	28.6
2007	1,639	819	50.0	4,081	3,264	20.0	5,719	4,084	28.6
2008	1,675	837	50.0	4,171	3,337	20.0	5,846	4,174	28.6
2009	1,712	856	50.0	4,264	3,411	20.0	5,976	4,267	28.6
2010	1,750	875	50.0	4,359	3,487	20.0	6,109	4,362	28.6
2011	1,789	895	50.0	4,455	3,564	20.0	6,244	4,459	28.6
2012	1,829	914	50.0	4,554	3,644	20.0	6,383	4,558	28.6
2013	1,869	935	50.0	4,656	3,724	20.0	6,525	4,659	28.6
2014	1,911	955	50.0	4,759	3,807	20.0	6,670	4,763	28.6
2015	1,953	977	50.0	4,865	3,892	20.0	6,818	4,868	28.6
2016	1,997	998	50.0	4,973	3,978	20.0	6,970	4,977	28.6
2017	2,041	1,021	50.0	5,083	4,067	20.0	7,124	5,087	28.6
2018	2,086	1,043	50.0	5,196	4,157	20.0	7,283	5,200	28.6
2019	2,133	1,066	50.0	5,312	4,249	20.0	7,444	5,316	28.6
2020	2,180	1,090	50.0	5,430	4,344	20.0	7,610	5,434	28.6
2021	2,229	1,114	50.0	5,550	4,440	20.0	7,779	5,554	28.6
2022	2,278	1,139	50.0	5,673	4,539	20.0	7,952	5,678	28.6
2023	2,329	1,164	50.0	5,799	4,640	20.0	8,128	5,804	28.6
2024	2,380	1,190	50.0	5,928	4,743	20.0	8,309	5,933	28.6
2025	2,433	1,217	50.0	6,060	4,848	20.0	8,493	6,065	28.6

Table D54
United States - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	3,466	3,466	0.0	17,697	17,697	0.0	21,163	21,163	0.0
1985	3,766	3,766	0.0	19,231	19,231	0.0	22,997	22,997	0.0
1986	4,162	4,162	0.0	20,601	20,601	0.0	24,763	24,763	0.0
1987	4,542	4,542	0.0	21,925	21,925	0.0	26,467	26,467	0.0
1988	4,975	4,975	0.0	23,142	23,142	0.0	28,117	28,117	0.0
1989	5,485	5,485	0.0	24,234	24,234	0.0	29,719	29,719	0.0
1990	6,041	6,041	0.0	25,237	25,237	0.0	31,278	31,278	0.0
1991	6,564	6,564	0.0	26,236	26,236	0.0	32,800	32,800	0.0
1992	7,012	7,012	0.0	27,277	27,277	0.0	34,290	34,290	0.0
1993	7,436	7,436	0.0	28,344	28,344	0.0	35,781	35,781	0.0
1994	8,010	8,010	0.0	29,186	29,186	0.0	37,196	37,196	0.0
1995	8,536	8,536	0.0	30,308	30,308	0.0	38,843	38,843	0.0
1996	9,019	9,019	0.0	31,466	31,466	0.0	40,484	40,484	0.0
1997	9,650	9,650	0.0	32,472	32,472	0.0	42,122	42,122	0.0
1998	10,140	10,140	0.0	33,104	33,104	0.0	43,244	43,244	0.0
1999	10,749	10,749	0.0	33,833	33,833	0.0	44,582	44,582	0.0
2000	11,308	11,308	0.0	34,612	34,612	0.0	45,919	45,919	0.0
2001	11,849	11,849	0.0	35,410	35,410	0.0	47,259	47,259	0.0
2002	12,369	12,369	0.0	36,233	36,233	0.0	48,602	48,602	0.0
2003	12,880	12,880	0.0	37,072	37,072	0.0	49,952	49,952	0.0
2004	13,384	13,384	0.0	37,927	37,927	0.0	51,310	51,310	0.0
2005	13,881	13,097	5.6	38,798	38,017	2.0	52,679	51,114	3.0
2006	14,374	12,851	10.6	39,686	38,169	3.8	54,059	51,020	5.6
2007	14,862	12,642	14.9	40,592	38,380	5.4	55,454	51,022	8.0
2008	15,348	12,468	18.8	41,515	38,646	6.9	56,864	51,115	10.1
2009	15,832	12,327	22.1	42,458	38,966	8.2	58,291	51,293	12.0
2010	16,316	12,216	25.1	43,420	39,335	9.4	59,736	51,551	13.7
2011	16,800	12,133	27.8	44,402	39,753	10.5	61,202	51,886	15.2
2012	17,285	12,077	30.1	45,404	40,216	11.4	62,689	52,293	16.6
2013	17,771	12,045	32.2	46,427	40,723	12.3	64,199	52,769	17.8
2014	18,261	12,037	34.1	47,472	41,273	13.1	65,733	53,310	18.9
2015	18,753	12,051	35.7	48,539	41,863	13.8	67,292	53,914	19.9
2016	19,250	12,085	37.2	49,629	42,492	14.4	68,878	54,577	20.8
2017	19,751	12,139	38.5	50,742	43,159	14.9	70,492	55,298	21.6
2018	20,257	12,211	39.7	51,878	43,863	15.4	72,136	56,074	22.3
2019	20,770	12,301	40.8	53,040	44,603	15.9	73,809	56,904	22.9
2020	21,288	12,407	41.7	54,226	45,379	16.3	75,514	57,785	23.5
2021	21,814	12,528	42.6	55,438	46,189	16.7	77,252	58,717	24.0
2022	22,347	12,665	43.3	56,676	47,032	17.0	79,023	59,697	24.5
2023	22,888	12,816	44.0	57,942	47,909	17.3	80,830	60,726	24.9
2024	23,437	12,981	44.6	59,235	48,819	17.6	82,672	61,800	25.2
2025	23,996	13,160	45.2	60,556	49,761	17.8	84,551	62,921	25.6

Table D55
TOTAL - Investment Flows
 (All data are in millions of 2004 USD)

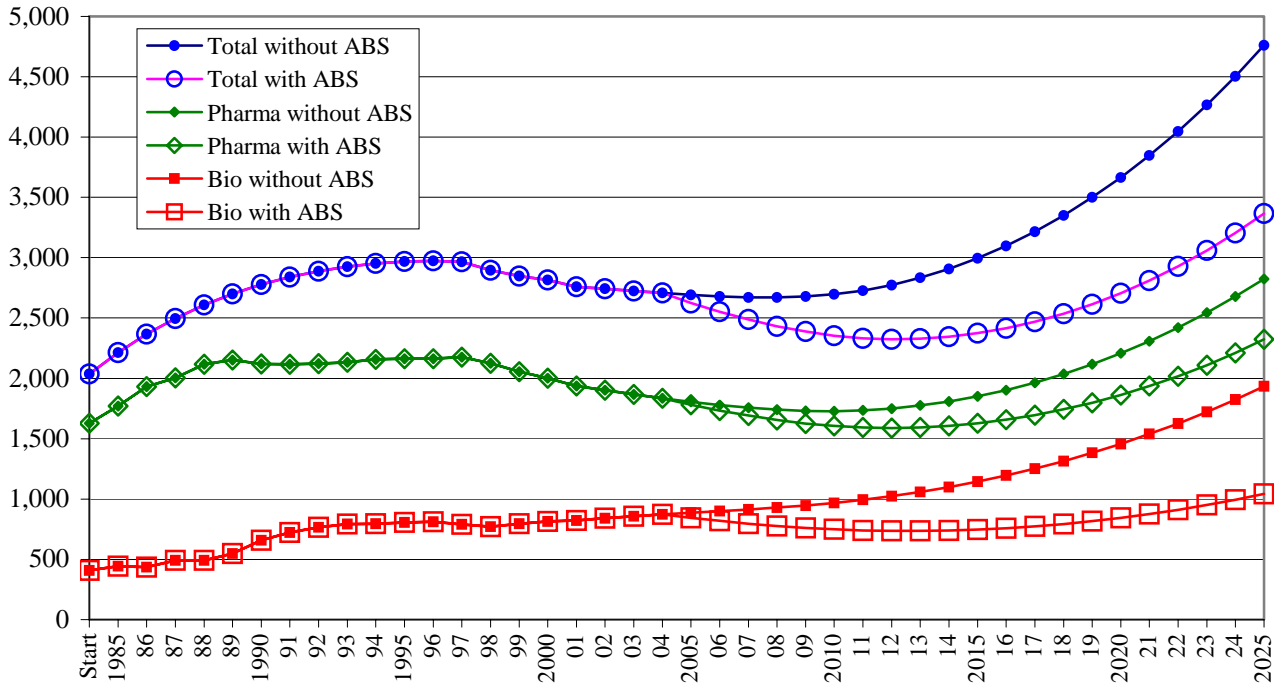
Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
1985	1,443	1,443	0.0	7,995	7,995	0.0	9,437	9,437	0.0
1986	1,454	1,454	0.0	8,261	8,261	0.0	9,715	9,715	0.0
1987	1,713	1,713	0.0	8,312	8,312	0.0	10,025	10,025	0.0
1988	1,858	1,858	0.0	8,538	8,538	0.0	10,397	10,397	0.0
1989	2,163	2,163	0.0	8,710	8,710	0.0	10,873	10,873	0.0
1990	2,359	2,359	0.0	9,584	9,584	0.0	11,943	11,943	0.0
1991	2,463	2,463	0.0	9,891	9,891	0.0	12,354	12,354	0.0
1992	2,879	2,879	0.0	11,411	11,411	0.0	14,290	14,290	0.0
1993	2,635	2,635	0.0	10,949	10,949	0.0	13,583	13,583	0.0
1994	3,019	3,019	0.0	10,823	10,823	0.0	13,841	13,841	0.0
1995	3,454	3,454	0.0	12,501	12,501	0.0	15,955	15,955	0.0
1996	3,524	3,524	0.0	11,907	11,907	0.0	15,431	15,431	0.0
1997	4,355	4,355	0.0	11,788	11,788	0.0	16,142	16,142	0.0
1998	4,379	4,379	0.0	12,155	12,155	0.0	16,534	16,534	0.0
1999	4,661	4,661	0.0	12,480	12,480	0.0	17,141	17,141	0.0
2000	4,813	4,813	0.0	13,139	13,139	0.0	17,952	17,952	0.0
2001	5,282	5,282	0.0	13,748	13,748	0.0	19,030	19,030	0.0
2002	5,745	5,745	0.0	14,407	14,407	0.0	20,152	20,152	0.0
2003	6,106	6,106	0.0	15,336	15,336	0.0	21,442	21,442	0.0
2004	6,451	6,451	0.0	16,234	16,234	0.0	22,686	22,686	0.0
2005	6,811	3,405	50.0	17,169	13,735	20.0	23,980	17,140	28.5
2006	7,182	3,591	50.0	18,135	14,508	20.0	25,317	18,099	28.5
2007	7,565	3,782	50.0	19,130	15,304	20.0	26,694	19,086	28.5
2008	7,957	3,979	50.0	20,151	16,121	20.0	28,109	20,100	28.5
2009	8,361	4,180	50.0	21,199	16,959	20.0	29,560	21,140	28.5
2010	8,784	4,392	50.0	22,294	17,835	20.0	31,079	22,228	28.5
2011	9,234	4,617	50.0	23,453	18,763	20.0	32,687	23,380	28.5
2012	9,712	4,856	50.0	24,685	19,748	20.0	34,397	24,604	28.5
2013	10,220	5,110	50.0	25,992	20,794	20.0	36,212	25,904	28.5
2014	10,759	5,380	50.0	27,380	21,904	20.0	38,139	27,283	28.5
2015	11,332	5,666	50.0	28,852	23,082	20.0	40,184	28,748	28.5
2016	11,940	5,970	50.0	30,413	24,331	20.0	42,353	30,301	28.5
2017	12,584	6,292	50.0	32,069	25,655	20.0	44,653	31,947	28.5
2018	13,267	6,633	50.0	33,823	27,058	20.0	47,090	33,692	28.5
2019	13,990	6,995	50.0	35,681	28,544	20.0	49,671	35,540	28.4
2020	14,756	7,378	50.0	37,646	30,117	20.0	52,403	37,495	28.4
2021	15,567	7,783	50.0	39,725	31,780	20.0	55,292	39,563	28.4
2022	16,423	8,212	50.0	41,922	33,538	20.0	58,345	41,749	28.4
2023	17,328	8,664	50.0	44,243	35,394	20.0	61,571	44,058	28.4
2024	18,283	9,142	50.0	46,693	37,354	20.0	64,976	46,496	28.4
2025	19,292	9,646	50.0	49,277	39,422	20.0	68,569	49,068	28.4

Table D56
TOTAL - Capital Stocks
 (All data are in millions of 2004 USD)

Year	Biotechnological			Pharmaceutical			TOTAL		
	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline	Without ABS	With ABS	Percent Decline
Starting Capital	8,656	8,656	0.0	47,969	47,969	0.0	56,625	56,625	0.0
1985	9,406	9,406	0.0	52,126	52,126	0.0	61,532	61,532	0.0
1986	10,108	10,108	0.0	56,217	56,217	0.0	66,325	66,325	0.0
1987	11,013	11,013	0.0	60,032	60,032	0.0	71,044	71,044	0.0
1988	11,990	11,990	0.0	63,768	63,768	0.0	75,757	75,757	0.0
1989	13,194	13,194	0.0	67,376	67,376	0.0	80,570	80,570	0.0
1990	14,498	14,498	0.0	71,570	71,570	0.0	86,068	86,068	0.0
1991	15,801	15,801	0.0	75,735	75,735	0.0	91,536	91,536	0.0
1992	17,416	17,416	0.0	81,087	81,087	0.0	98,503	98,503	0.0
1993	18,658	18,658	0.0	85,549	85,549	0.0	104,206	104,206	0.0
1994	20,183	20,183	0.0	89,528	89,528	0.0	109,711	109,711	0.0
1995	22,023	22,023	0.0	94,867	94,867	0.0	116,889	116,889	0.0
1996	23,785	23,785	0.0	99,184	99,184	0.0	122,969	122,969	0.0
1997	26,237	26,237	0.0	103,037	103,037	0.0	129,274	129,274	0.0
1998	28,517	28,517	0.0	106,949	106,949	0.0	135,466	135,466	0.0
1999	30,896	30,896	0.0	110,873	110,873	0.0	141,769	141,769	0.0
2000	33,238	33,238	0.0	115,141	115,141	0.0	148,379	148,379	0.0
2001	35,861	35,861	0.0	119,679	119,679	0.0	155,539	155,539	0.0
2002	38,737	38,737	0.0	124,511	124,511	0.0	163,248	163,248	0.0
2003	41,744	41,744	0.0	129,886	129,886	0.0	171,630	171,630	0.0
2004	44,856	44,856	0.0	135,730	135,730	0.0	180,586	180,586	0.0
2005	48,078	44,673	7.1	142,040	138,606	2.4	190,118	183,279	3.6
2006	51,414	44,690	13.1	148,812	142,026	4.6	200,226	186,716	6.7
2007	54,866	44,897	18.2	156,037	145,968	6.5	210,903	190,865	9.5
2008	58,434	45,284	22.5	163,706	150,412	8.1	222,139	195,696	11.9
2009	62,120	45,842	26.2	171,808	155,338	9.6	233,928	201,180	14.0
2010	65,934	46,567	29.4	180,358	160,746	10.9	246,292	207,313	15.8
2011	69,894	47,458	32.1	189,382	166,649	12.0	259,276	214,107	17.4
2012	74,014	48,518	34.4	198,916	173,065	13.0	272,931	221,582	18.8
2013	78,313	49,746	36.5	208,995	180,013	13.9	287,308	229,759	20.0
2014	82,808	51,146	38.2	219,655	187,516	14.6	302,462	238,662	21.1
2015	87,515	52,721	39.8	230,934	195,596	15.3	318,449	248,316	22.0
2016	92,453	54,473	41.1	242,873	204,279	15.9	335,326	258,752	22.8
2017	97,641	56,407	42.2	255,512	213,592	16.4	353,153	269,999	23.5
2018	103,097	58,528	43.2	268,894	223,563	16.9	371,991	282,091	24.2
2019	108,839	60,841	44.1	283,063	234,222	17.3	391,902	295,063	24.7
2020	114,889	63,352	44.9	298,064	245,602	17.6	412,953	308,953	25.2
2021	121,264	66,067	45.5	313,944	257,734	17.9	435,208	323,800	25.6
2022	127,986	68,993	46.1	330,751	270,653	18.2	458,737	339,646	26.0
2023	135,075	72,138	46.6	348,534	284,395	18.4	483,609	356,533	26.3
2024	142,553	75,508	47.0	367,344	298,998	18.6	509,897	374,506	26.6
2025	150,440	79,113	47.4	387,234	314,500	18.8	537,674	393,613	26.8

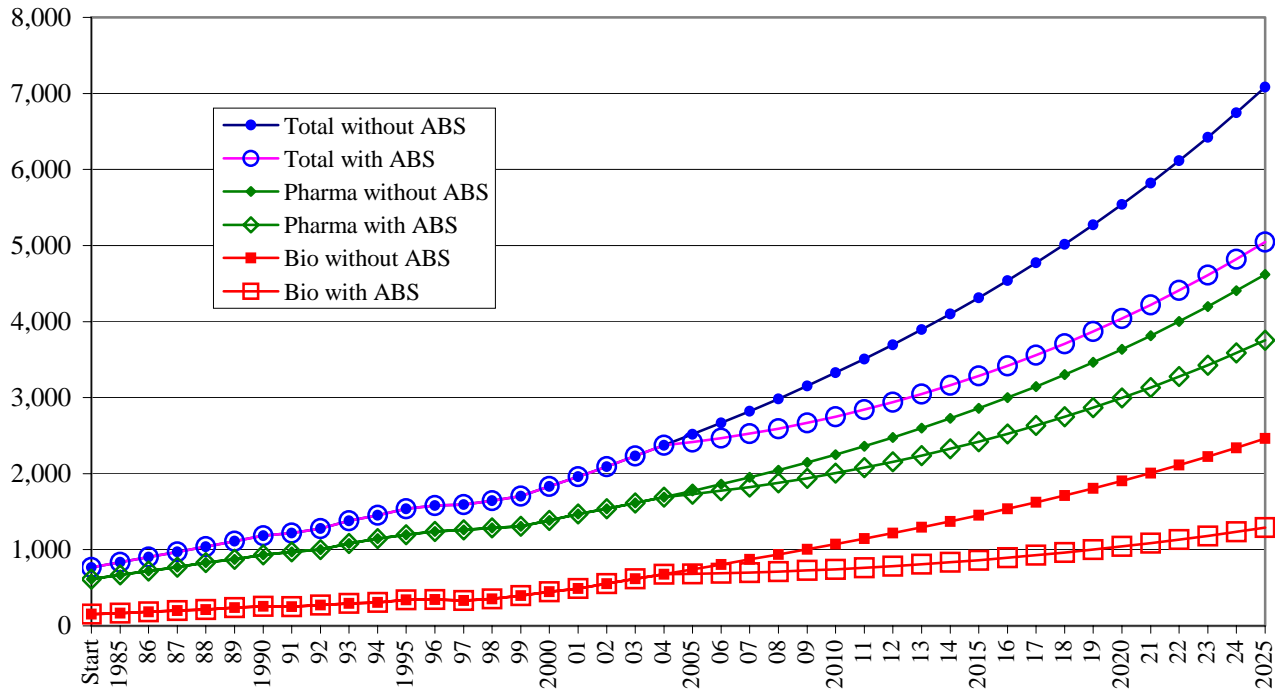
Appendix E: Country-Level Capital Stock Charts

AUSTRALIA
Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)



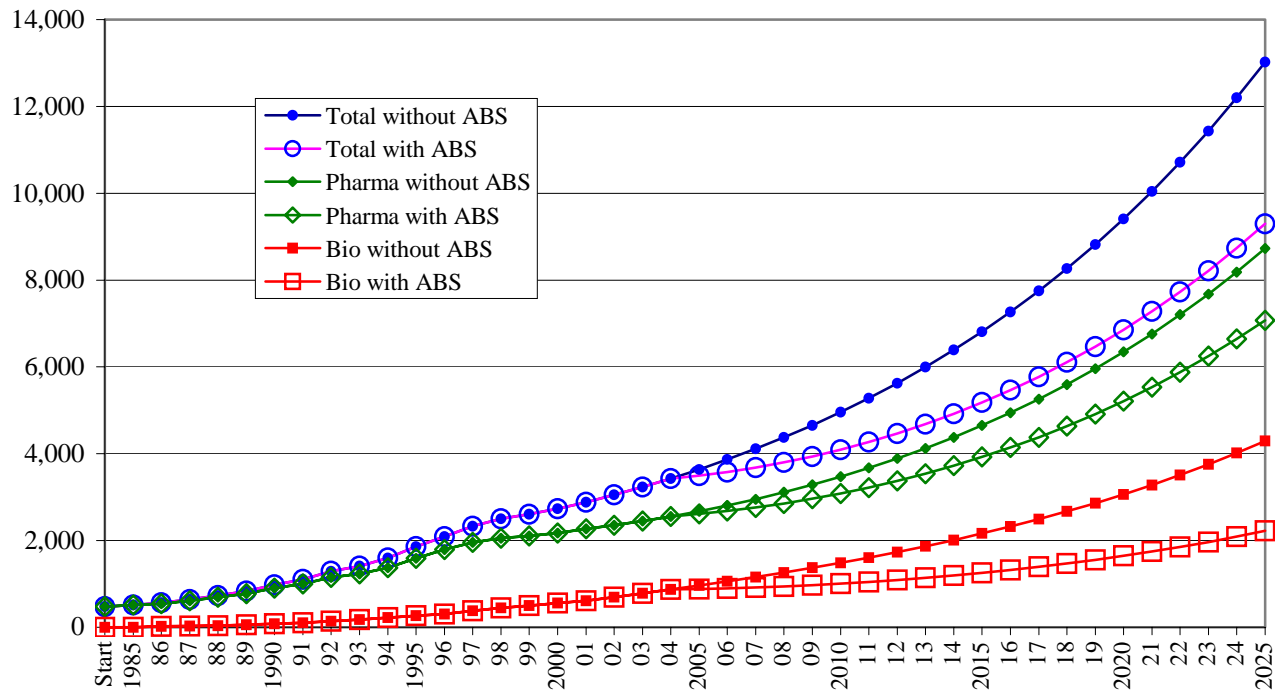
AUSTRIA

Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)

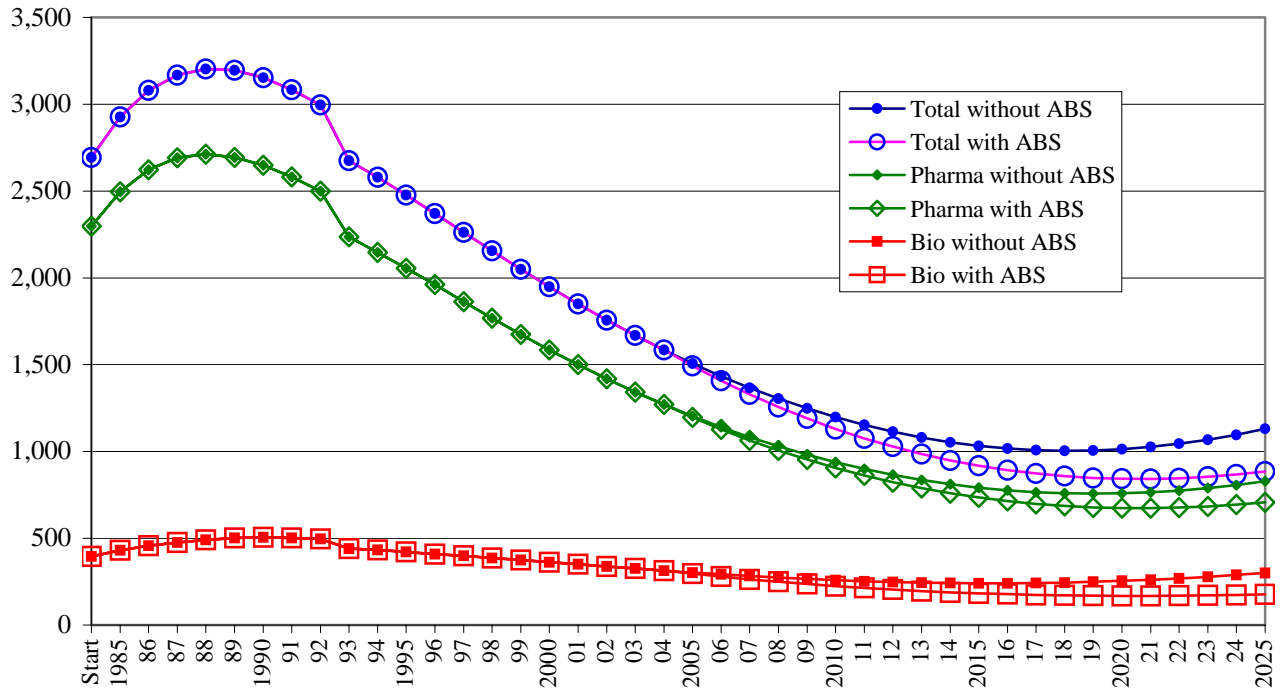


BELGIUM

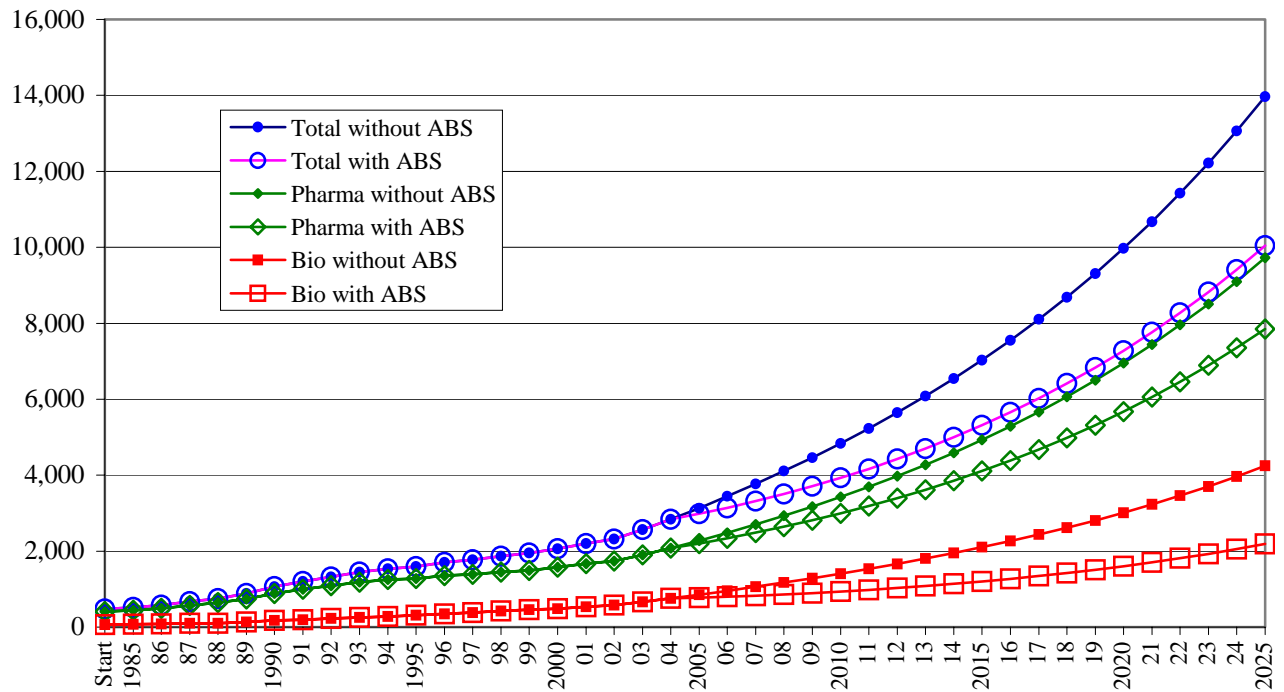
Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)



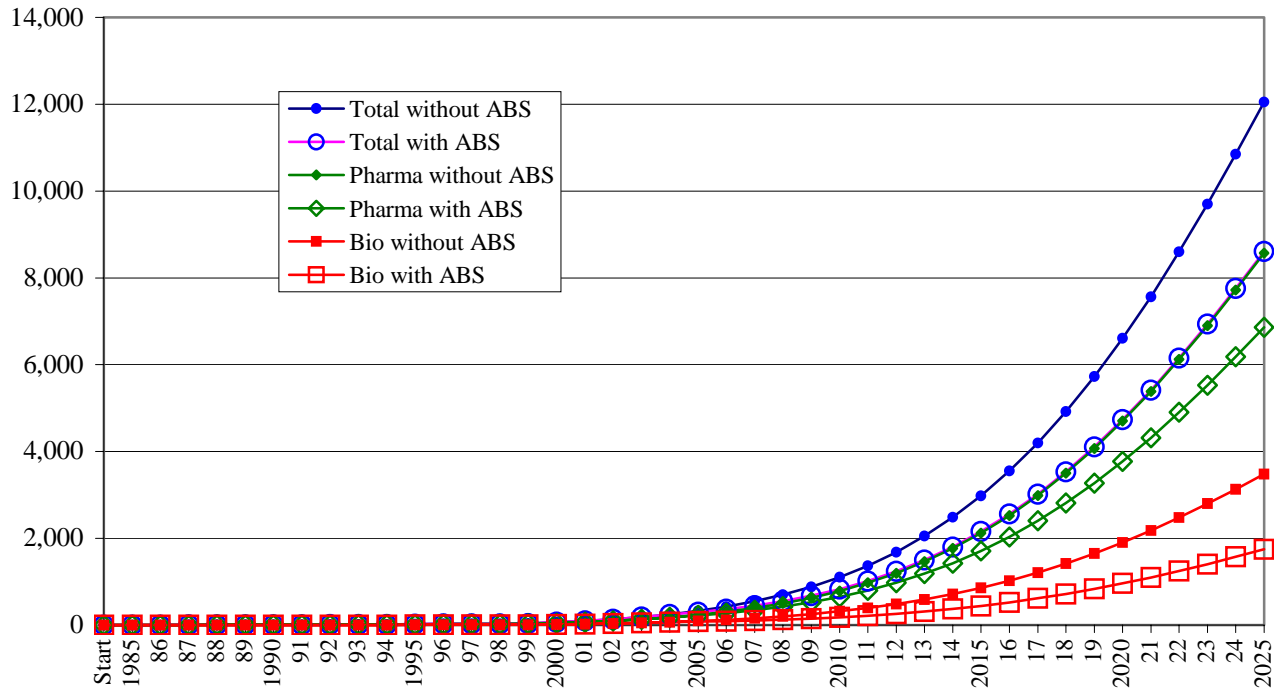
BRAZIL
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



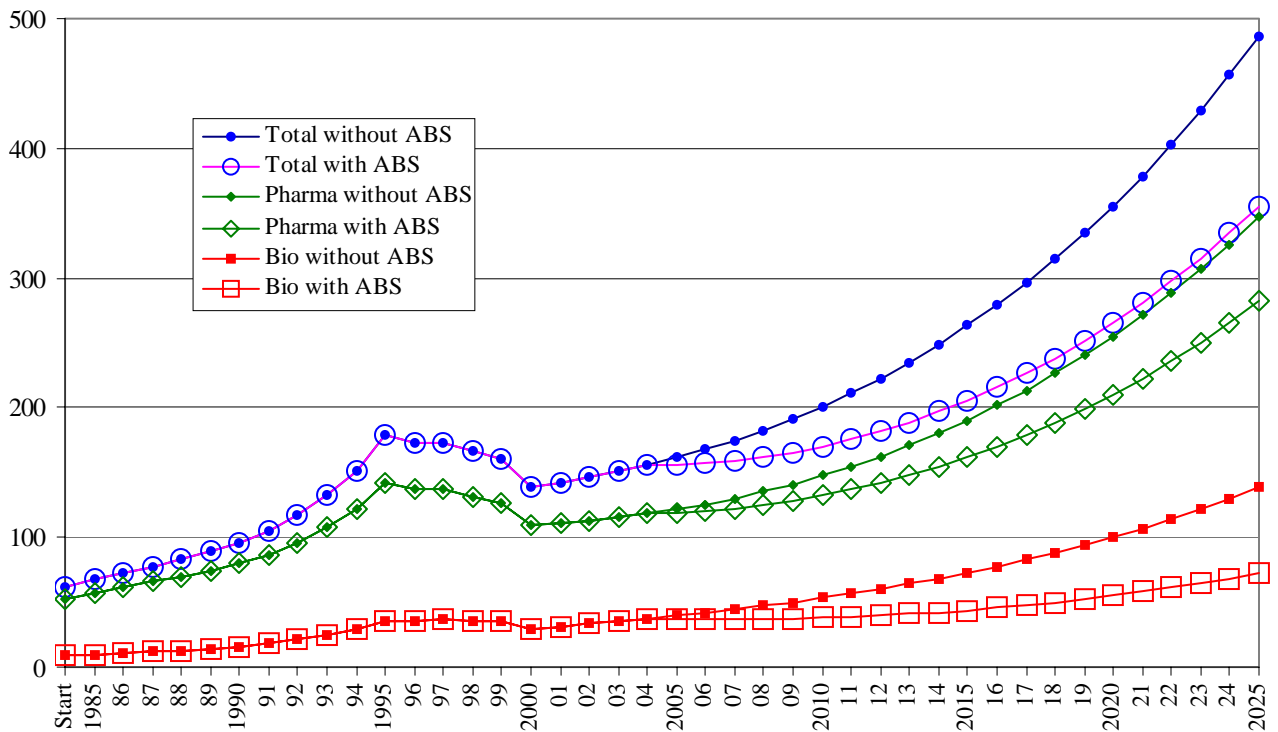
CANADA
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



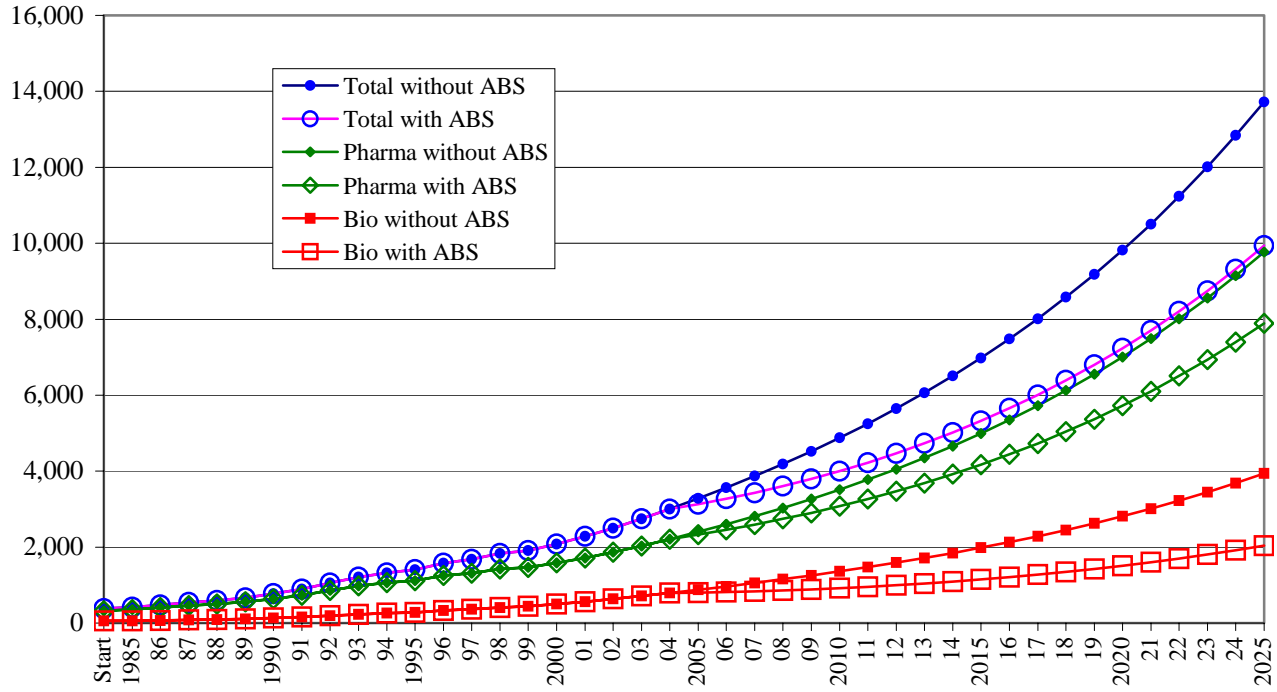
CHINA Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025 (millions of 2004 USD)



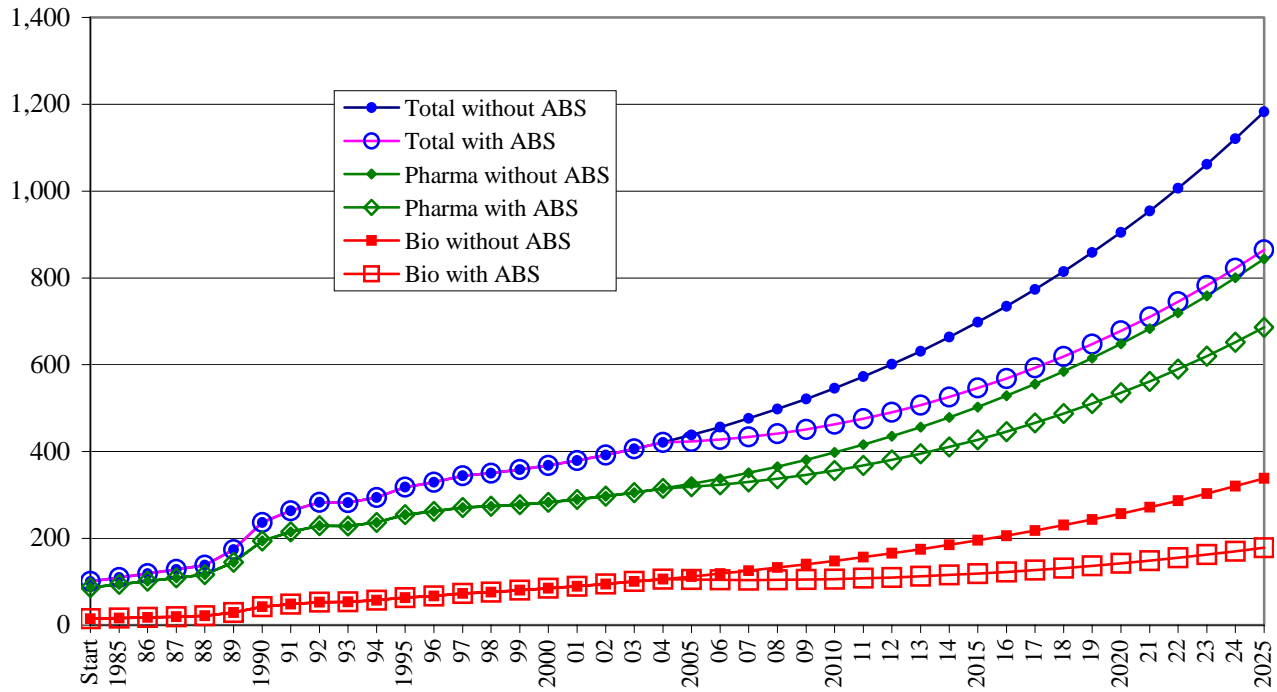
COLOMBIA Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025 (millions of 2004 USD)



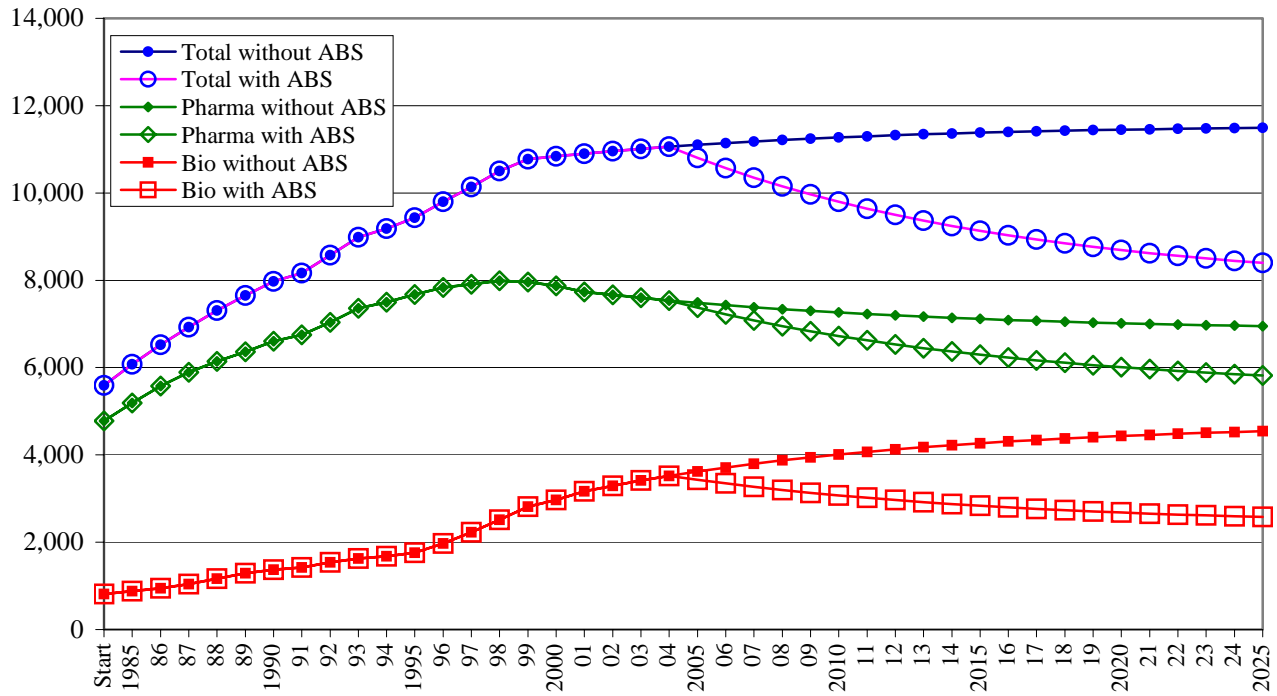
DENMARK
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



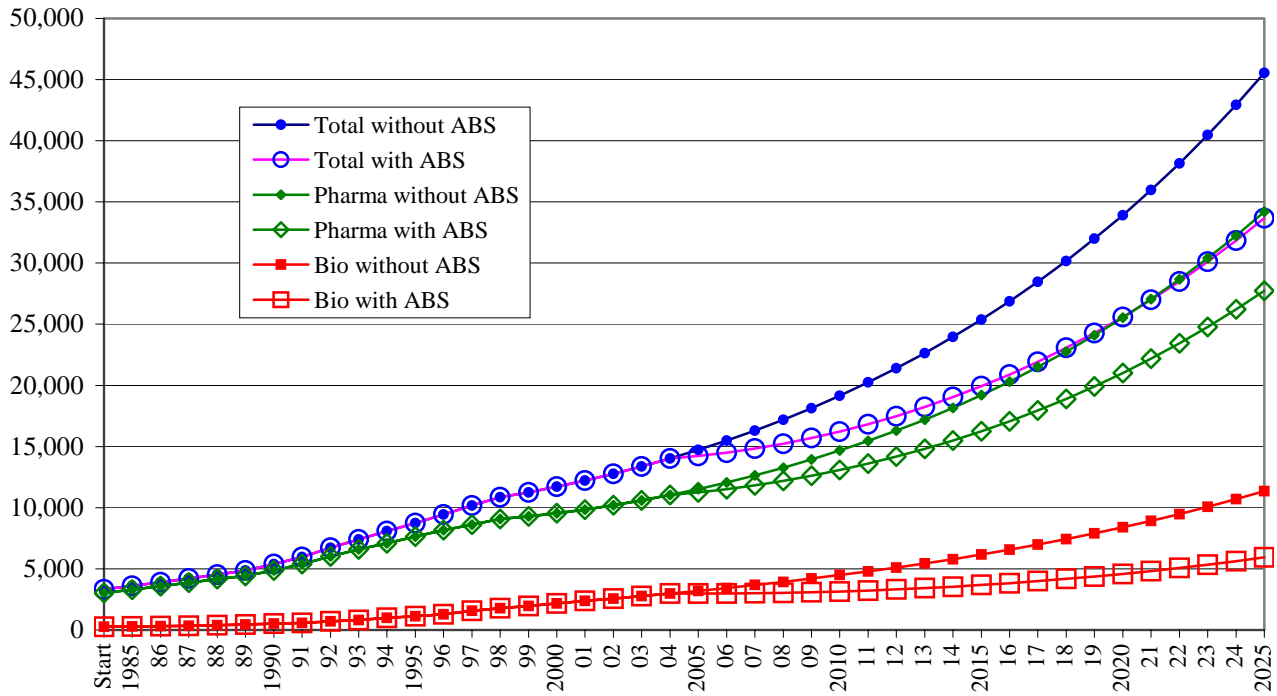
FINLAND
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



FRANCE
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)

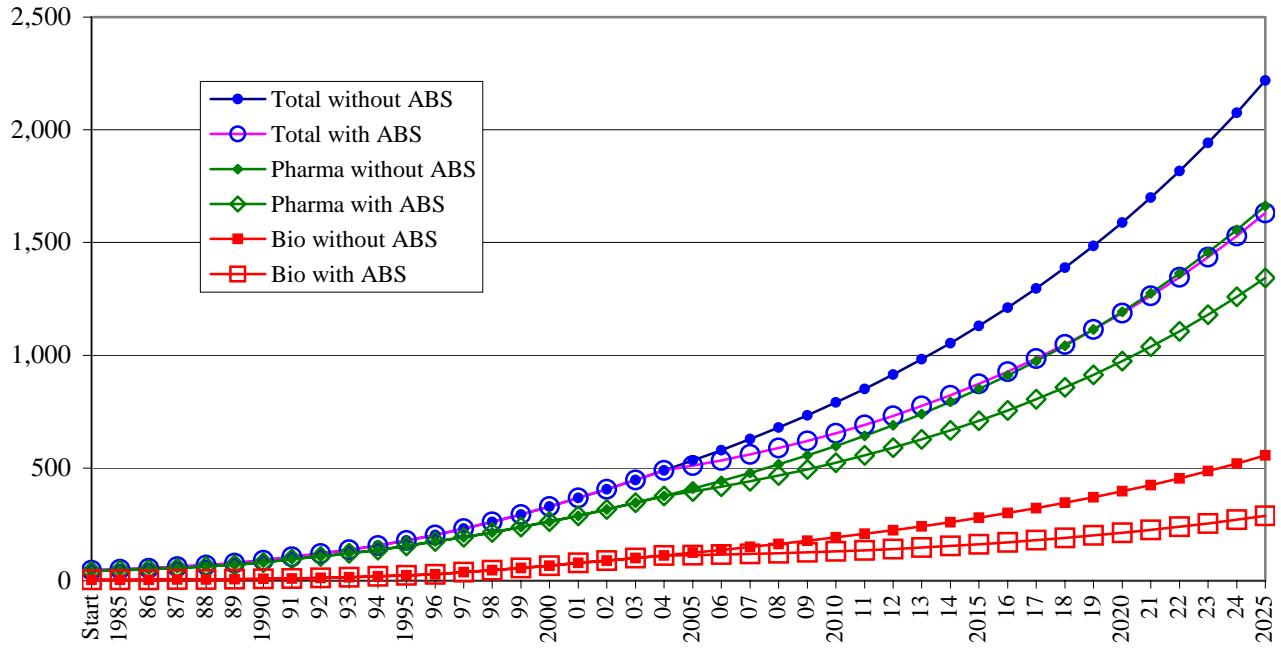


GERMANY
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



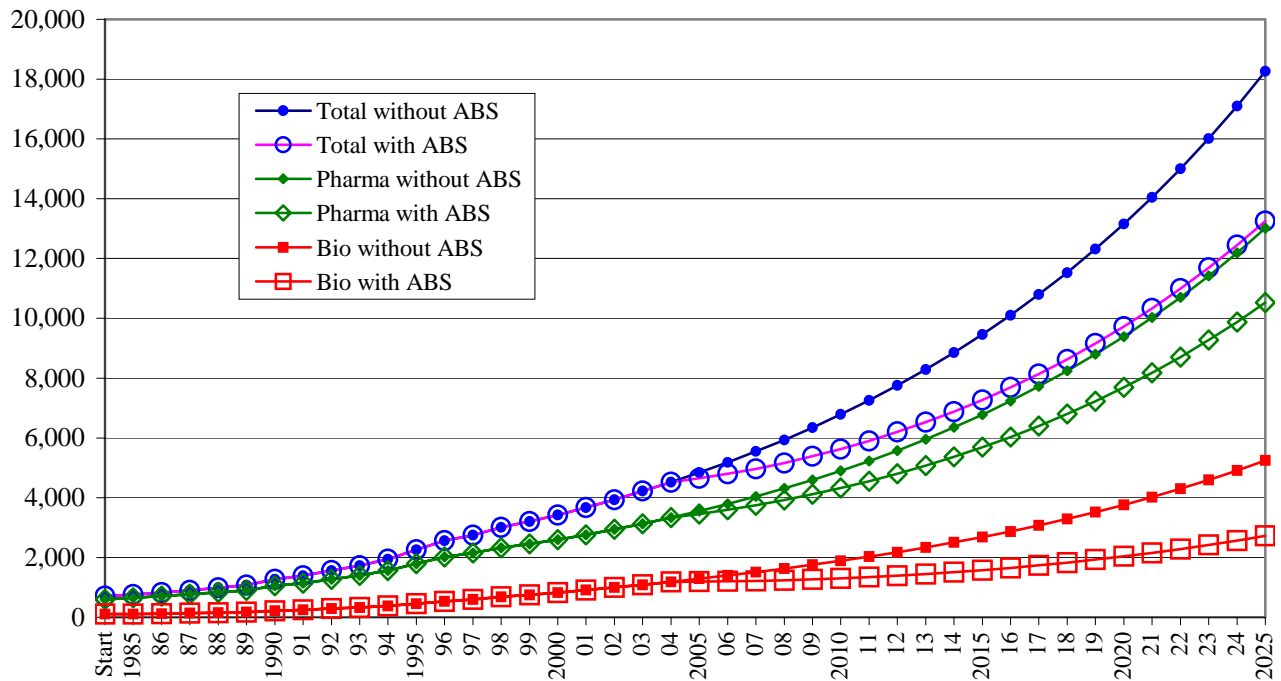
GREECE

Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)



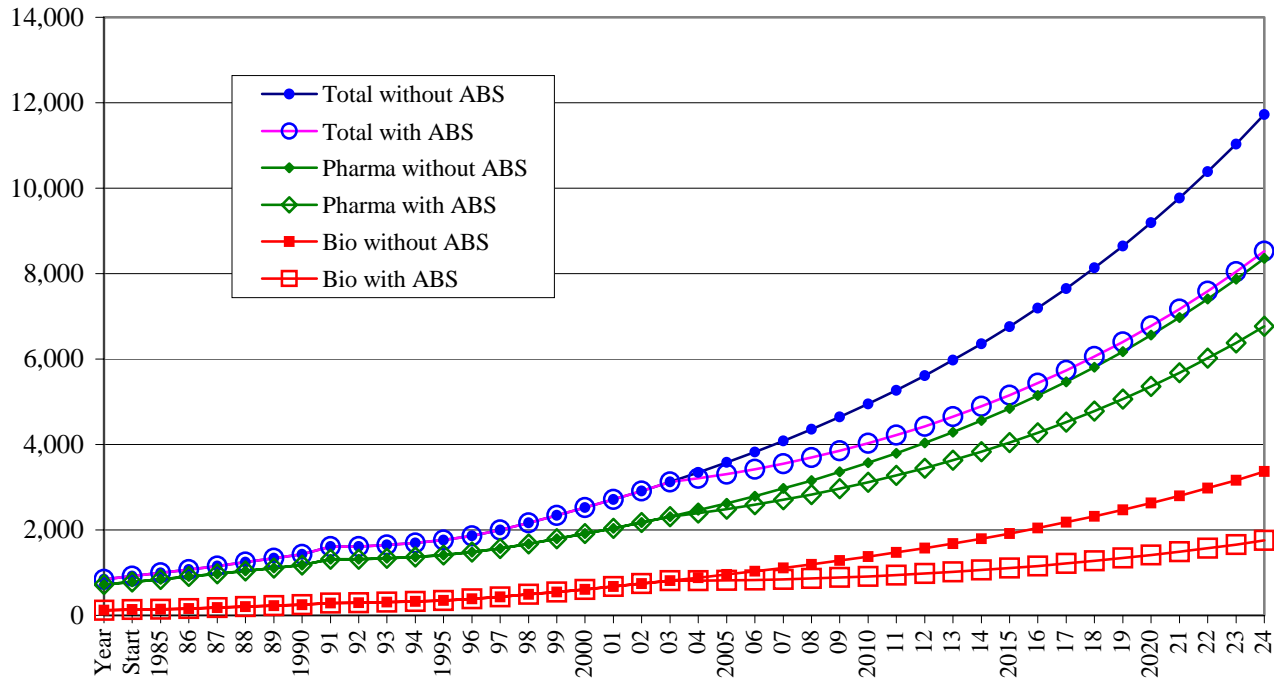
INDIA

Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)



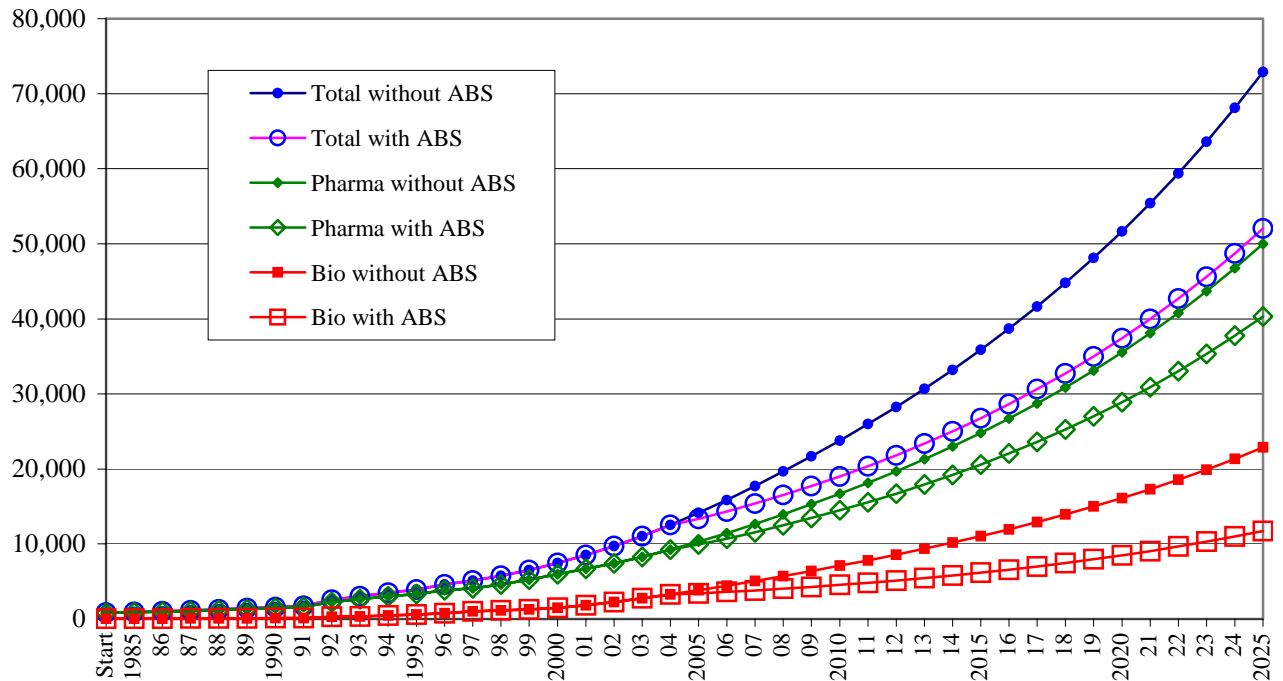
IRELAND

Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)

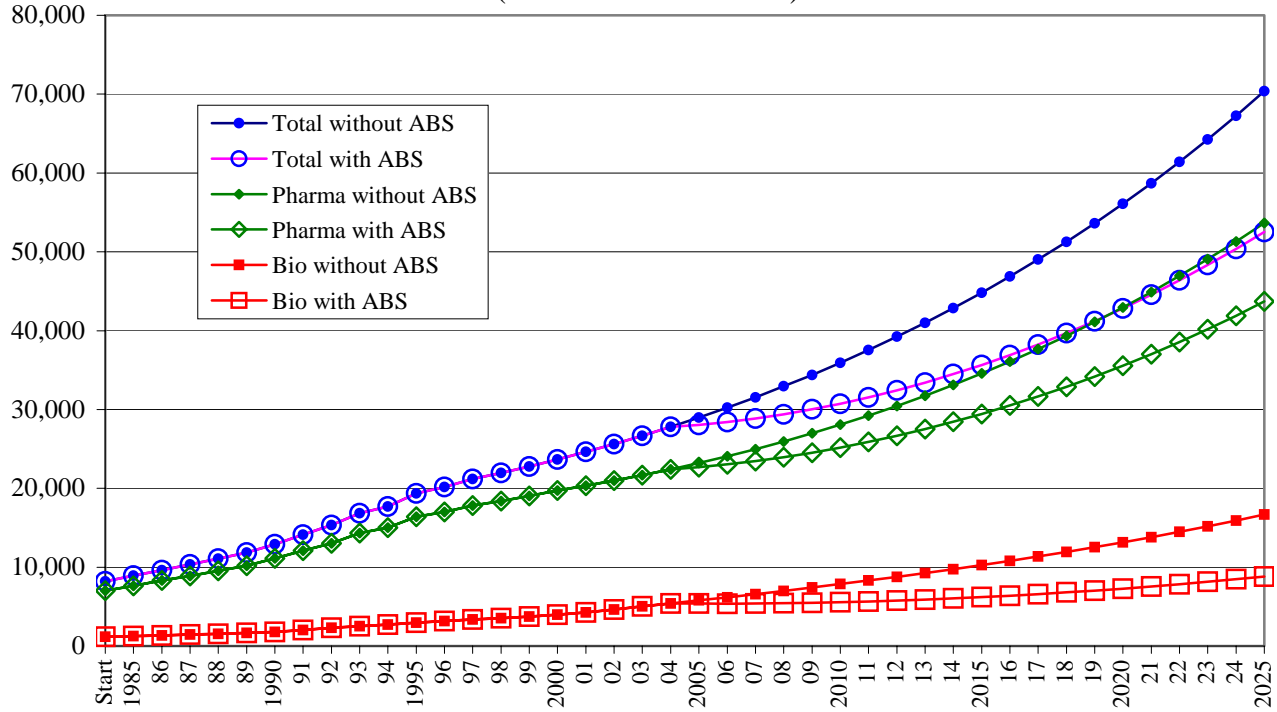


ITALY

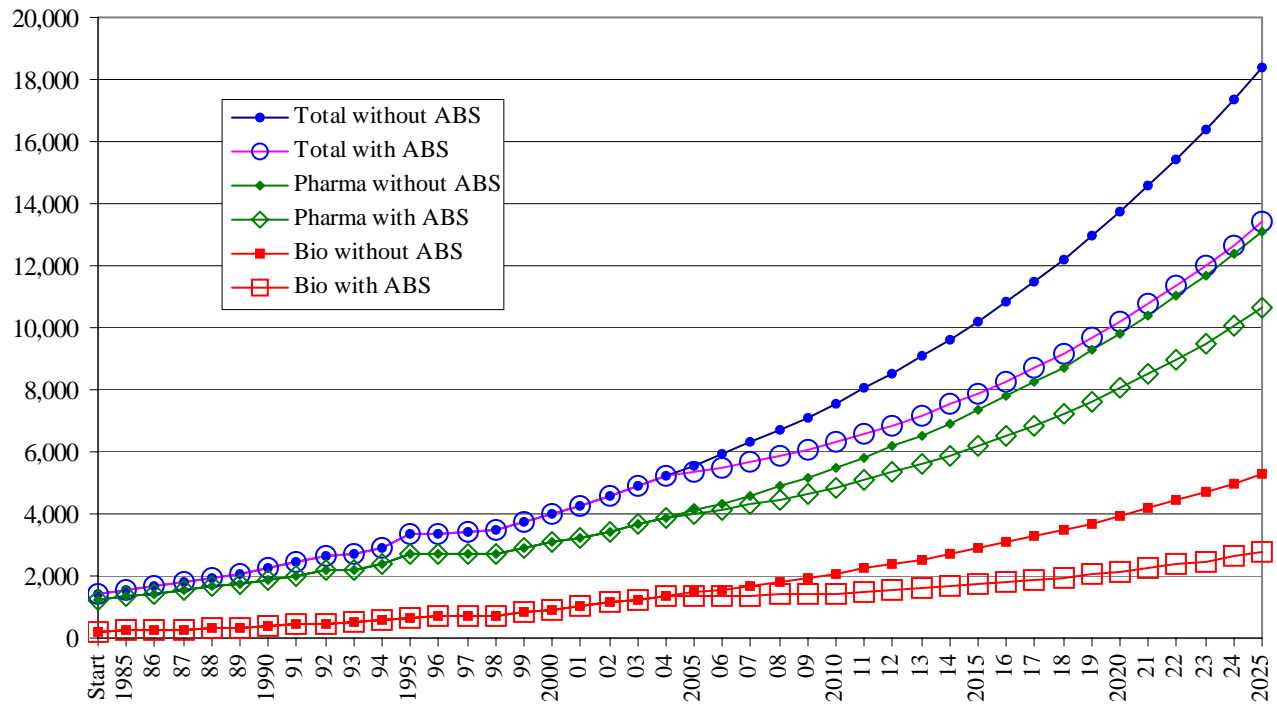
Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
(millions of 2004 USD)



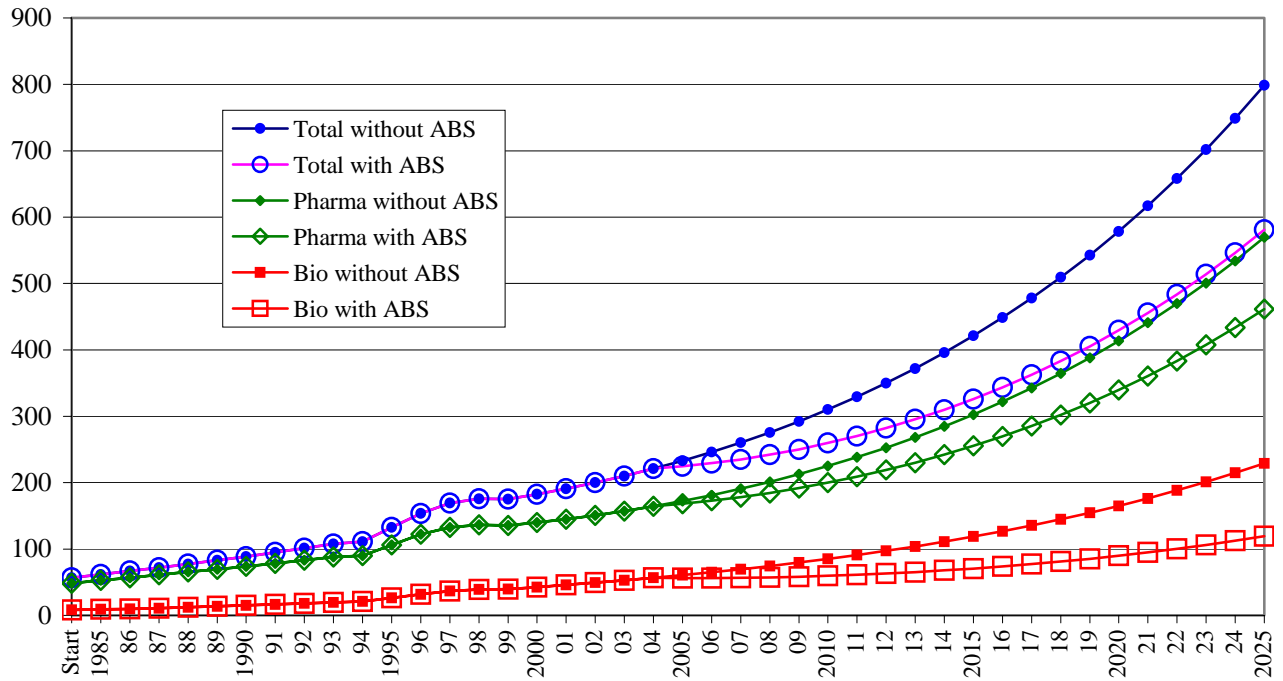
JAPAN Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025 (millions of 2004 USD)



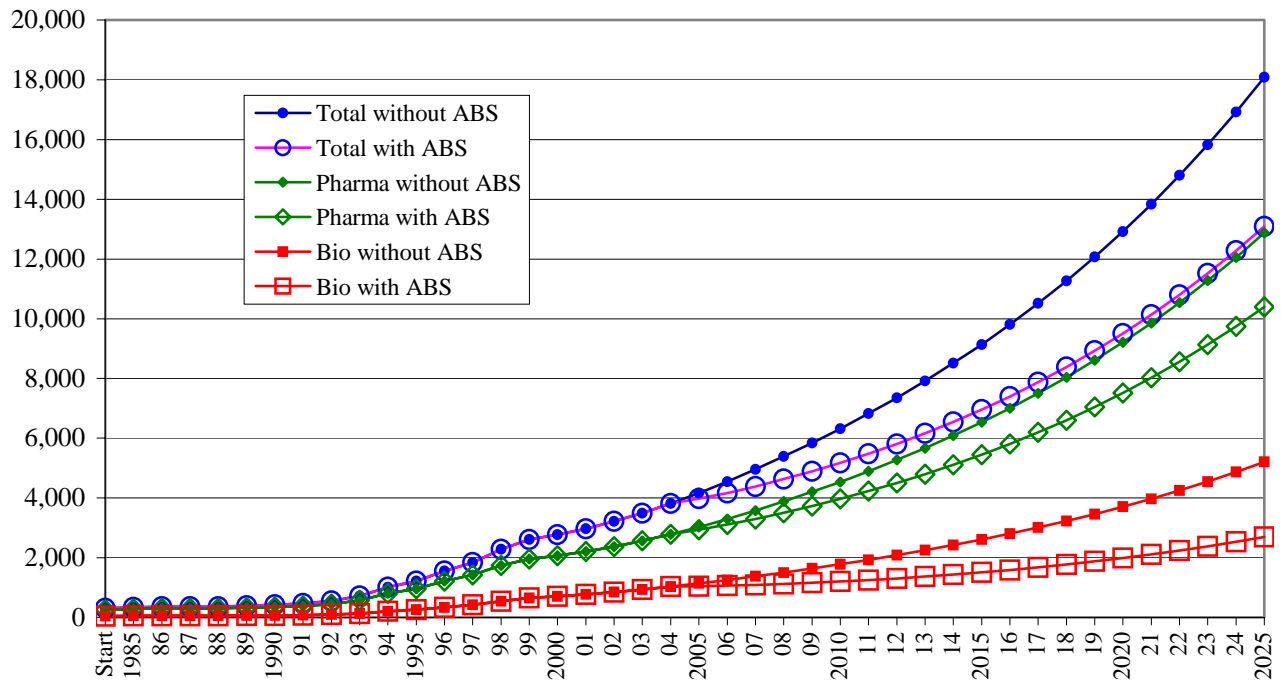
KOREA Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025 (millions of 2004 USD)



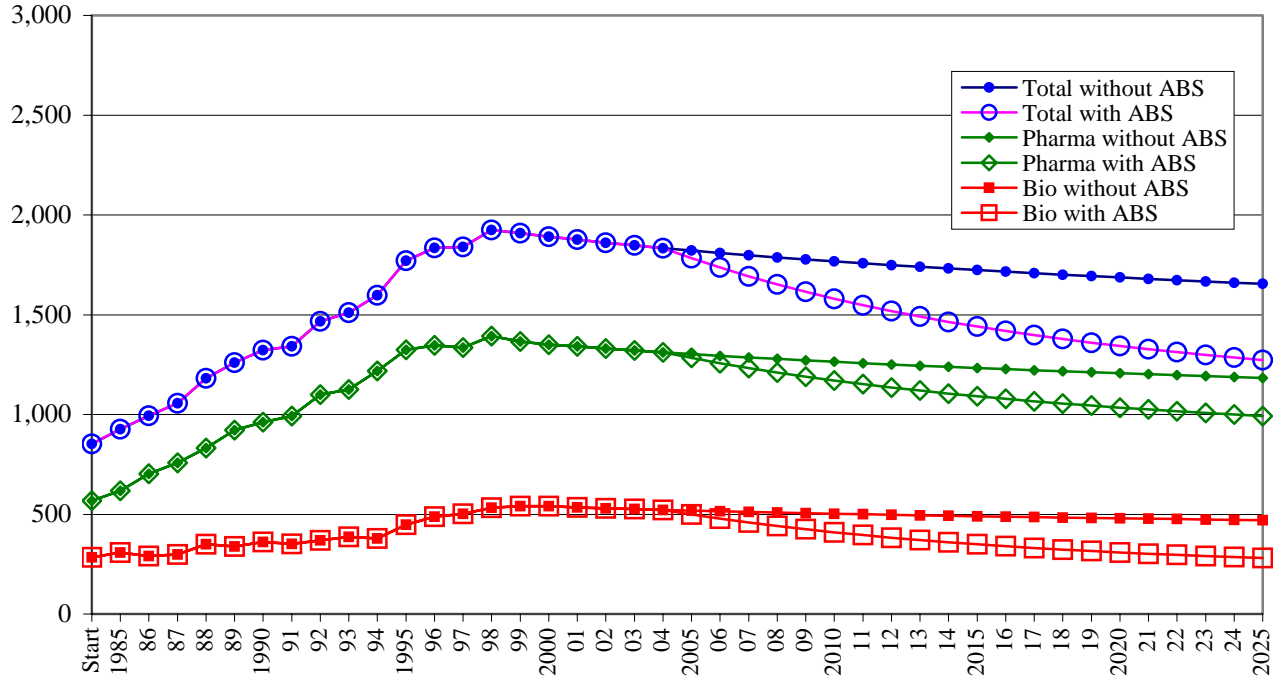
MALAYSIA
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



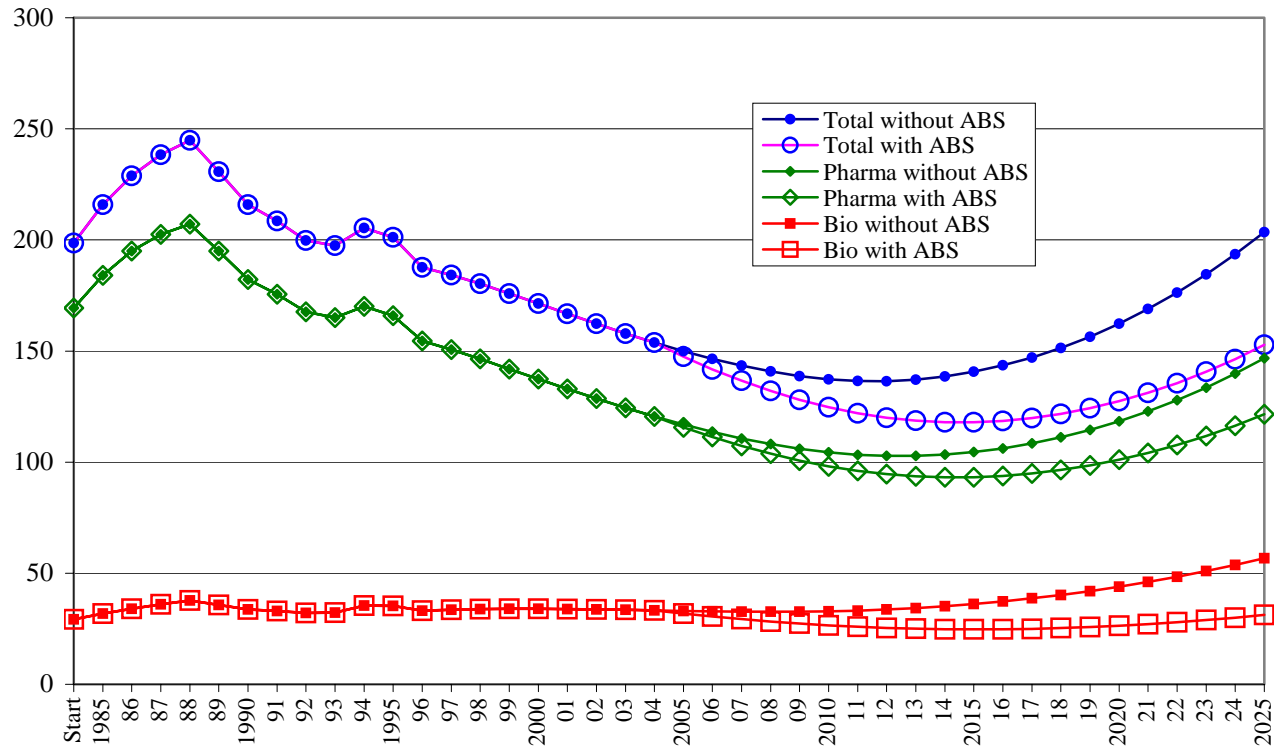
MEXICO
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



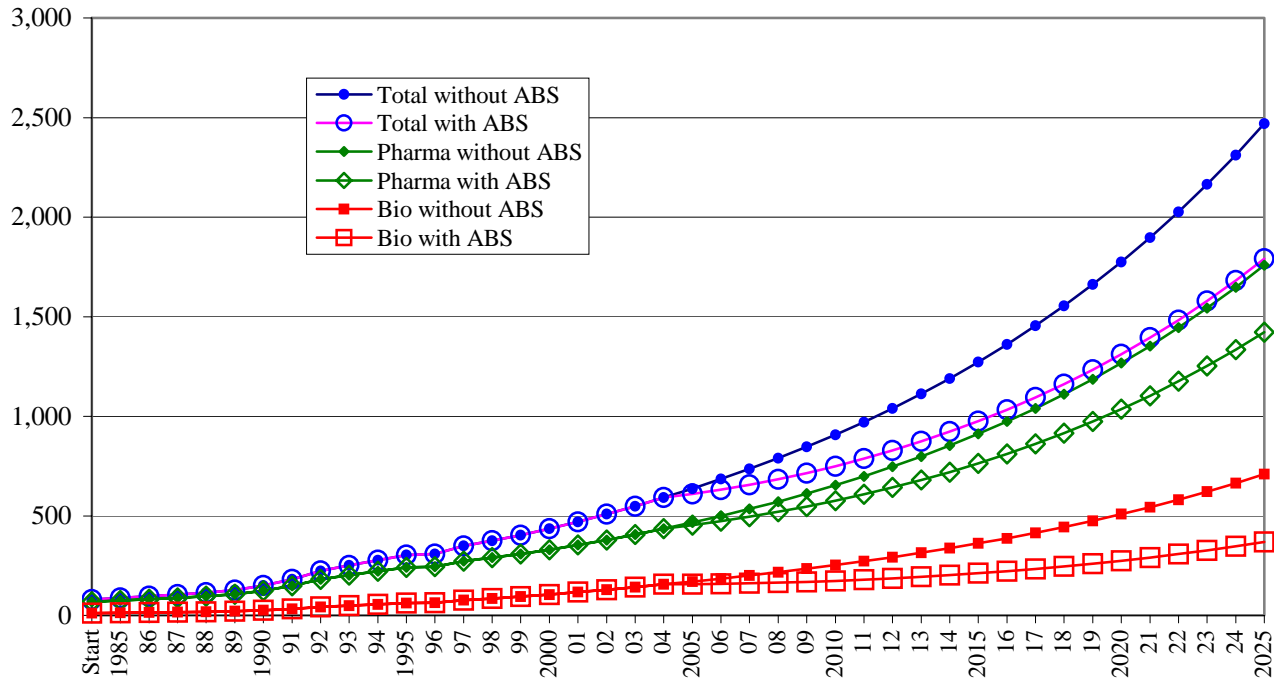
NETHERLANDS
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



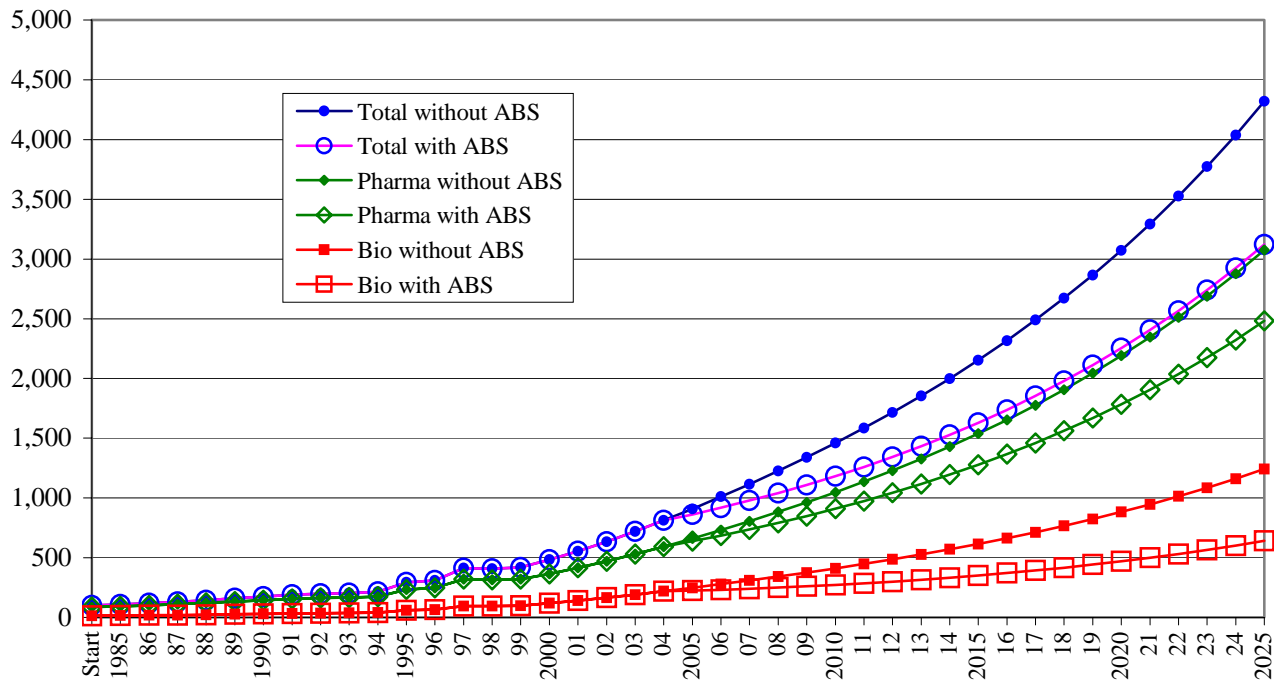
PERU
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



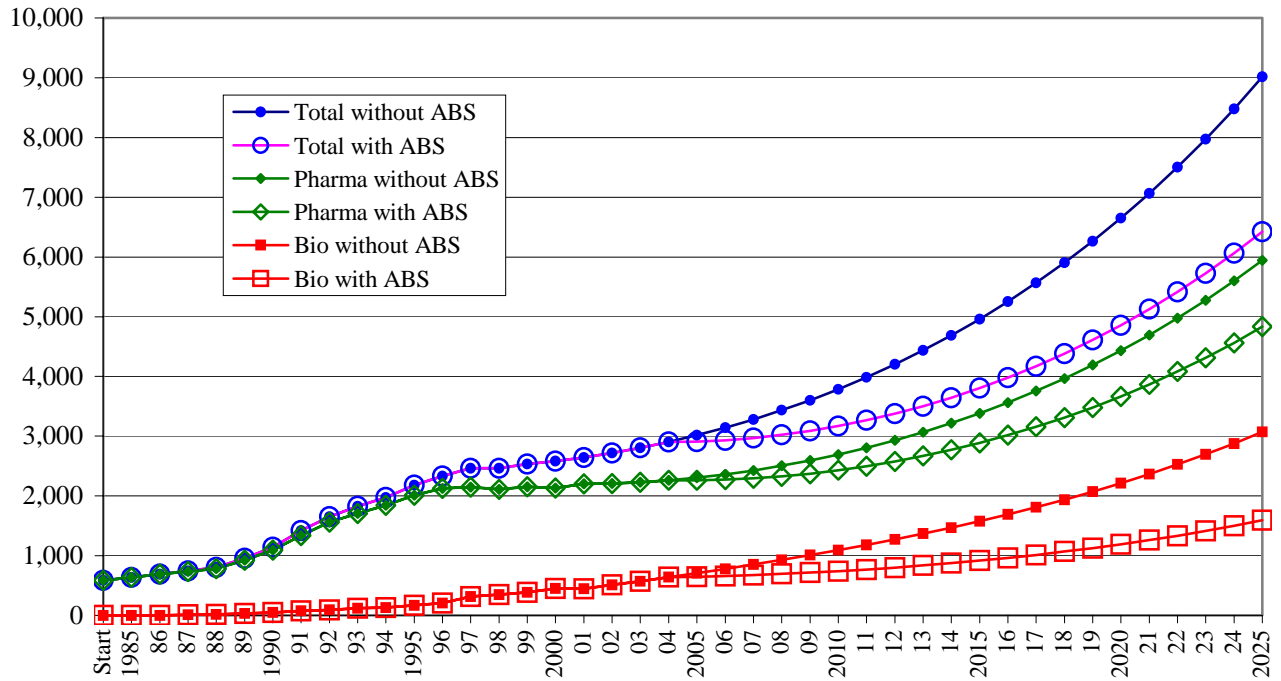
PORTUGAL
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



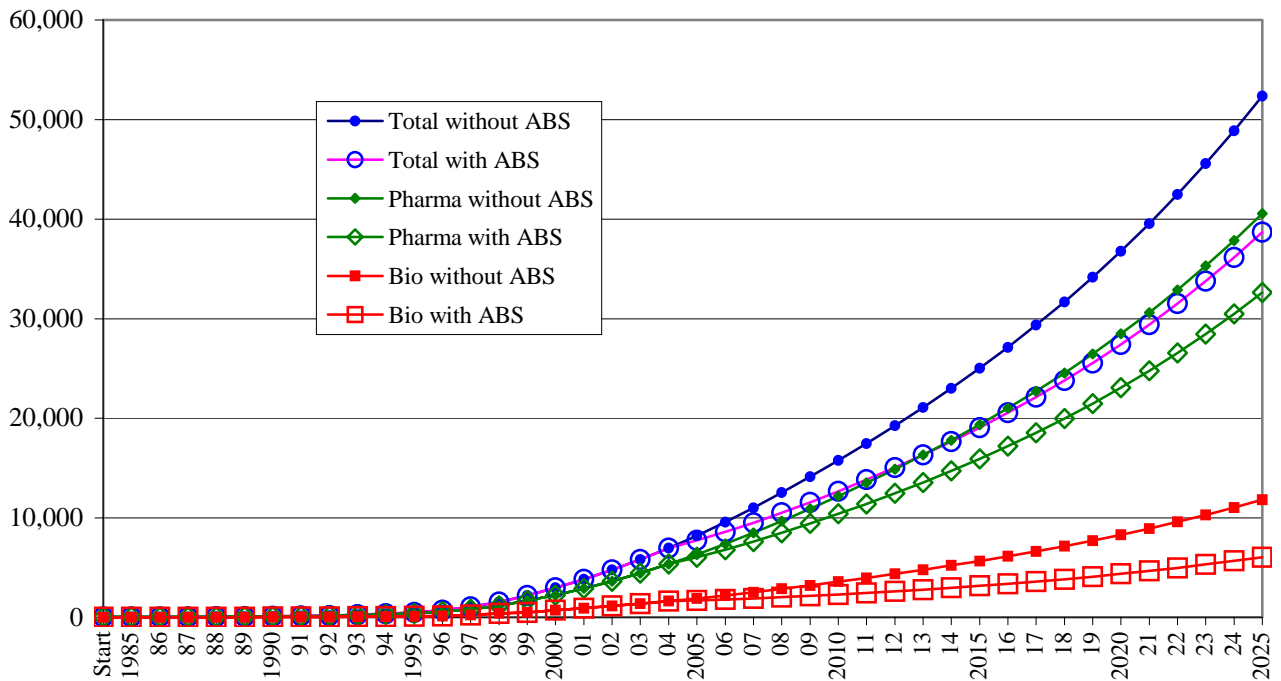
SINGAPORE
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



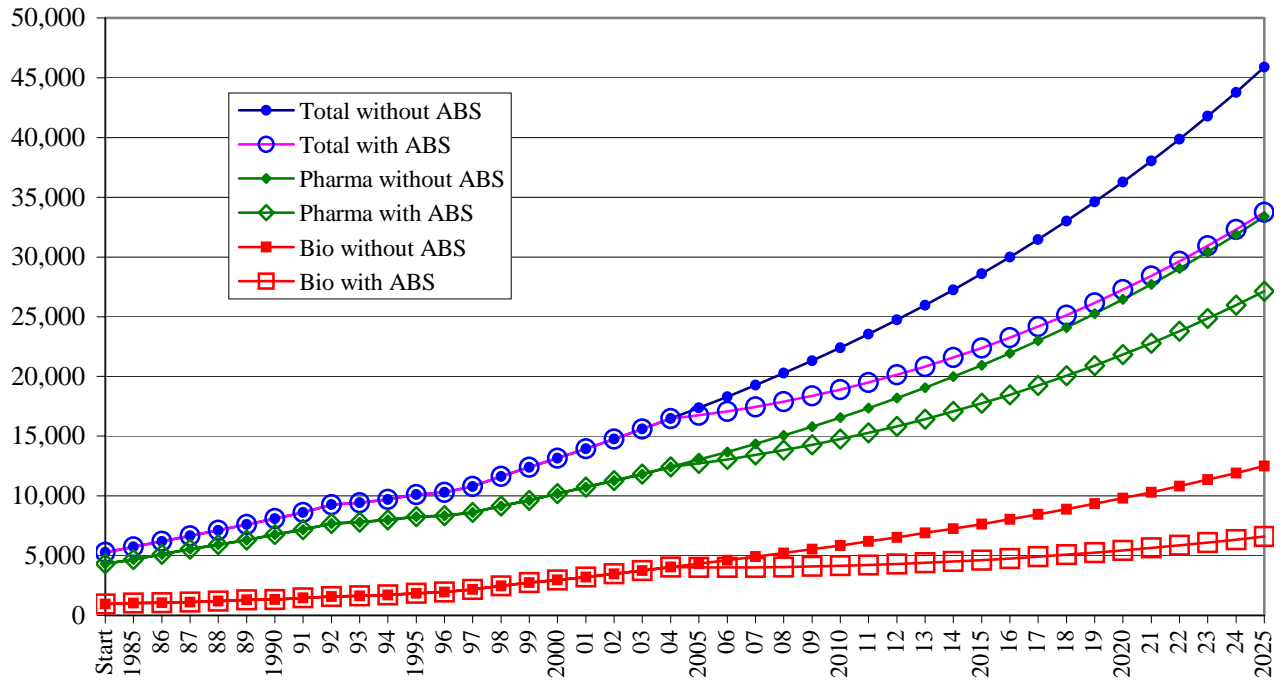
SPAIN
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



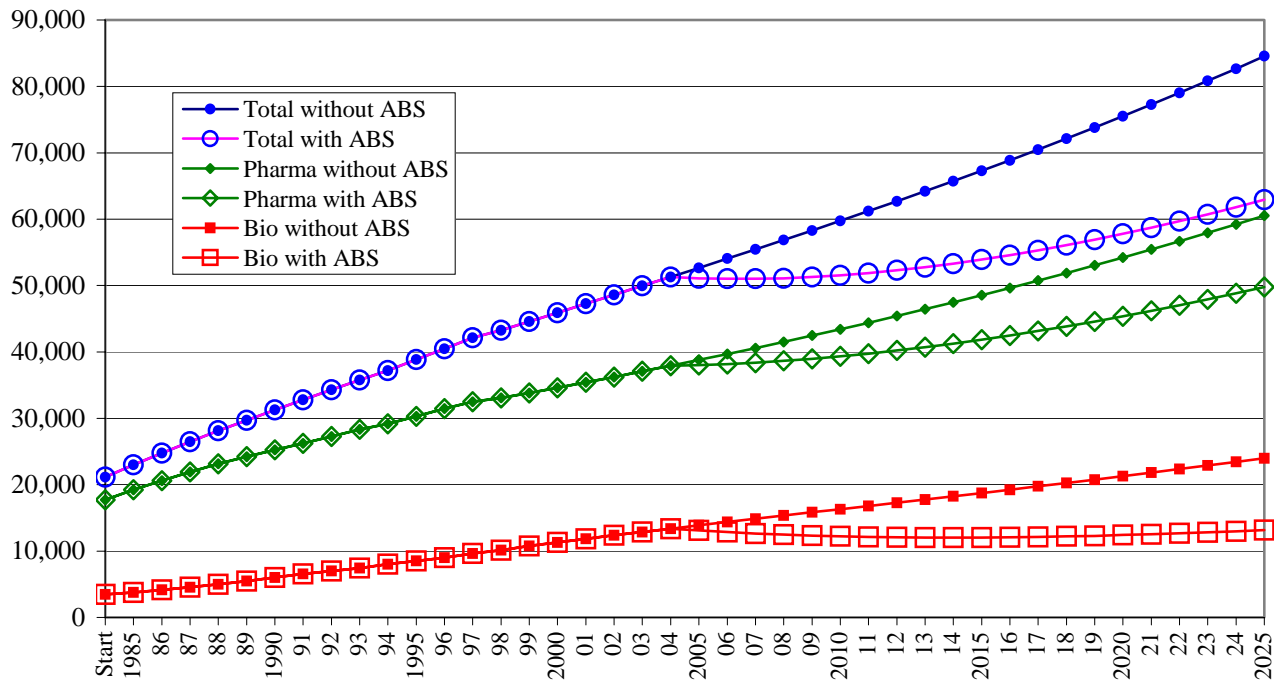
SWEDEN
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



UNITED KINGDOM
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



UNITED STATES
 Biotechnological and Pharmaceutical Capital Stocks 1985 - 2025
 (millions of 2004 USD)



Appendix F: About the Authors

Timothy A. Wolfe

Timothy A. Wolfe is Chief Executive Officer of QueryLogic Corporation, a software firm that specializes in demographic data-mining tools for businesses and universities. QueryLogic also provides consulting services related to its demographic databases. Prior to earning his M.B.A. at the University of Southern California, he founded Geonomics, a consultancy specializing in demographic analysis, litigation support, and bank regulatory matters. He is a former Senior Research Analyst at the Supervisory Policy Analysis Group of the Federal Reserve Bank of St. Louis. He also holds a bachelors degree in Economics from the University of California, San Diego.

He had done considerable work providing litigation support, particularly in cases of alleged racial and gender bias, and he has consulted on cases ranging from contract disputes to antitrust. In addition, he has done extensive work in bank regulation, geographic information systems, and spatial econometrics.

tim.wolfe@querylogic.com
www.querylogic.com
800.960.8615

Dr. Benjamin Zycher

May 2005

Benjamin Zycher is the President of Benjamin Zycher Economics Associates and a senior fellow in economics at the Pacific Research Institute for Public Policy. In addition, he is an adjunct senior economist at the Rand Corporation, an adjunct scholar at the Cato Institute in Washington, a member of the advisory board of the quarterly journal *Regulation*, and a member of the Advisory Council of Consumer Alert. He is a former senior economist at the Rand Corporation, a former member of the Board of Directors of the Western Economic Association International, a former adjunct professor of economics at the University of California, Los Angeles, a former vice president for research at the Milken Institute, the former editor of the quarterly public policy magazine *Jobs & Capital*, and a former senior staff economist at the President's Council of Economic Advisers during the first two years of the Reagan Administration. He holds a Ph.D. in Economics from the University of California Los Angeles (1979) and a Master of Public Policy from the University of California Berkeley (1974).

He has done considerable work on the economic and political effects of regulation, on the effects of government spending, taxation, and debt, on benefit/cost analysis of counterterrorism public expenditures, and on the effects of economic institutions and performance upon economic growth and resource use. He has done a substantial amount of work as well on energy and environmental policy, and on such varying topics in international economics as resource dependence and the risk of "shocks," long-term trends in economic performance and military capability, the use of trade policy in pursuit of foreign policy goals, and measures of burdensharing within alliances. His other work is on voter information and voting behavior, and on choices among Constitutional institutions. Among his publications are "Defense Economics" and "OPEC" in the *Fortune Encyclopedia of Economics*.

He is a naturalized citizen of the United States (1956), 54 years of age, married with two children, and lives in Agoura Hills, California.

benzycher@bzecon.com

30141 Agoura Road
Suite 106
Agoura Hills, CA 91301-4332

818.706.1028 voice
818.706.6023 facsimile
818.383.6499 mobile

Appendix G: About the Pacific Research Institute

The Pacific Research Institute champions freedom, opportunity, and personal responsibility for all individuals by advancing free-market policy solutions that impact the daily lives of all Americans. It demonstrates why the free market is more effective than the government at providing the important results we all seek—good schools, quality health care, a clean environment, and economic growth.

Founded in 1979 and based in San Francisco, PRI is a non-profit, non-partisan organization supported by private contributions. Its activities include publications, public events, media commentary, community leadership, legislative testimony, and academic outreach.

Education Studies

PRI works to restore to all parents the basic right to choose the best educational opportunities for their children. Through research and grassroots outreach, PRI promotes parental choice in education, high academic standards, teacher quality, and school finance reform.

Business and Economic Studies

PRI shows how the entrepreneurial spirit—the engine of economic growth and opportunity—is stifled by onerous taxes and regulations. It advances policy reforms that promote a robust economy, consumer choice, and innovation.

Health Care Studies

PRI demonstrates why a single-payer, Canadian model would be detrimental to the health care of all Americans. It proposes market-based reforms that would improve affordability, access, quality, and consumer choice.

Technology Studies

PRI advances policies to defend individual liberty, foster high-tech growth and innovation, and limit regulation.

Environmental Studies

PRI reveals the dramatic and long-term trend towards a cleaner, healthier environment. It also examines and promotes the essential ingredients for abundant resources and environmental quality property rights, markets, local action, and private initiative.