The Negative Financial Impacts of Restricting U.S. Biopharmaceutical Industry Outbound Investment in China

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Policy proposals to restrict U.S. biopharmaceutical investment involving China could have major unintended consequences for American innovation and economic competitiveness. As China becomes an increasingly important source of biopharmaceutical innovation, such restrictions could limit U.S. companies' ability to access some of the world's most promising drug candidates. This could shrink U.S. medicine pipelines, put hundreds of billions of dollars in industry value at risk, and ultimately weaken the U.S. biopharmaceutical industry and the R&D ecosystem it supports.

Biopharmaceutical investment overseas has helped bring new medicines to American patients, helping them fight against many serious conditions such as cancer and rare diseases. Now, the ability to access these promising treatments and develop them for Americans is what hangs in the balance.

This analysis estimates the potential consequences of proposed outbound investment restrictions on biotechnology for the U.S. biopharmaceutical industry, patients, and the broader economy. It models projected outbound investment deals through 2030 under different scenarios, then estimates the impacts if restrictions prevent those deals from occurring. Findings show that imposing such restrictions could:

1. Reduce the expected number of novel drug approvals by between 61 and 73,
2. Put $488 to $584 billion in U.S. biopharmaceutical enterprise value at risk,
3. Reduce the expected U.S. biopharmaceutical industry's market capitalization by $444 billion to $532 billion, equivalent to 12% to 14% of the biopharmaceutical industry's 2026 market capitalization,
4. Jeopardize potential $20 to $24 billion in investment returns for the public pension funds of 37 million Americans, and,
5. Lead to a sustained loss of potential job creation, approximately 37,600 to 150,300 direct industry jobs and 129,700 to 518,700 total U.S. jobs by 2035.

I. Background

The U.S. Comprehensive Outbound Investment National Security Act (COINS), enacted in late 2025, establishes a framework to restrict certain U.S. outbound investments and transactions into countries of concern, particularly China, in certain technology sectors such as semiconductors and AI. The COINS Act

specifically identifies five technology sectors, including semiconductors and microelectronics, artificial intelligence, and quantum information technologies. The Act also grants the U.S. Treasury Department discretionary authority to expand the covered sectors through the rulemaking process without additional legislation. Although the biotechnology sector was not included in the legislated list of covered sectors, the Treasury Department proposed regulations in October 2026 that could add the biotechnology industry to the COINS Act's list of covered sectors and prohibit U.S. biopharmaceutical company investments and transactions involving China and other countries of concern.

This proposed expansion comes at a time when China has rapidly emerged as one of the world's most important sources of biopharmaceutical innovation. Chinese investments in scientific talent and its growing biotechnology ecosystem are producing a robust pipeline of promising drug candidates, making China a significant source of innovation for U.S. biopharmaceutical companies seeking to develop the next generation of medicines for Americans.

Restricting U.S. companies' ability to invest in and access this growing source of scientific innovation could therefore limit the ability of American companies to compete globally for promising drug candidates, weaken U.S. medicine pipelines, and ultimately reduce U.S. biopharmaceutical investment, innovation, and economic growth.

This brief analyzes the impacts of restricting outbound investment in China's biopharmaceutical sector on drug development and American companies, including on their revenues, enterprise value, market capitalization, and job creation.

II. US-China Outbound Biopharmaceutical Investment

Restrictions on outbound investment could take many forms and the proposed language defining the precise types of biopharmaceutical investments and transactions that could ultimately be subject to restrictions remains unclear. We focus on licensing activity as a proxy for total outbound investment as it provides a transparent and measurable way to assess U.S. companies' investment in China-origin innovation. Licensing deals are the most common of the four types of outbound investment (licensing, co-development, strategic alliances, and mergers and acquisitions (M&A)) between U.S. biopharmaceutical companies (buyers) and Chinese biopharmaceutical companies (sellers).

Using historical trends in licensing activity, we project U.S. investment through 2030 under four scenarios representing 25%, 50%, 75%, and 100% of the historical linear growth trend. We then estimate the number of new medicines expected to result from these transactions, accounting for likely drug development timelines and widely cited estimates of clinical success rates. We use these projections to estimate potential impacts on U.S. industry revenues, enterprise value, market capitalization, job creation, and public pension funds. Finally, we assume restrictions would eliminate all projected licensing activity and associated benefits under each scenario to illustrate the potential economic consequences.

III. Expected Economic Values of Potential Approved Drugs from Outbound Investment

Using industry standards, we estimate the economic value of approved drugs to the U.S. biopharmaceutical industry. The median lifetime of prescription drugs is 15.8 years, and the net present value of the lifetime

after-tax return for a prescription drug is estimated at about $3 billion.[1] Solving for a constant annual cash flow that produces a $3 billion net present value over a 15.8-year commercial life at a 10.5% discount rate yields approximately $400 million of annual after-tax operating income. Assuming a 20% net profit margin, the average drug would generate about $2 billion in net revenues per year.

To estimate the enterprise value of an approved drug (total value of business), we apply the U.S. biopharmaceutical valuation multiplier of 20 in 2026 to its estimated $400 million in annual after-tax income.[2] This yields an enterprise value of an approved drug at about $8 billion ($400 million x 20). Applying this estimate to the 61-73 drugs projected to be developed from outbound investment in China-headquartered biopharmaceutical companies during 2023-2030, we estimate enterprise value for the U.S. biopharmaceutical industry to increase by $488 billion for 61 approved drugs (25% linear trend scenario) and $584 billion for 73 approved drugs (100% linear trend scenario). (Table 1)

We then estimate the corresponding increase in U.S. biopharma industry market capitalization (total stock market value). Assuming debt and cash balances remain unchanged, changes in enterprise value translate proportionally into changes in equity market capitalization. Using the 1.10 enterprise value/market capitalization ratio in 2026,[3] we estimate that market capitalization would increase by $444 billion with 61 approved drugs and by $532 billion with 73 approved drugs, equivalent to 11.7% and 14.0% of the $3.787 trillion biopharmaceutical industry market capitalization in 2026. (Table 1)

Table 1.
Four Alternative Scenarios: Potential Changes in EV and Market Capitalization (MC) from Outbound Investment

	100% of 2023-26 Trend	75% of 2023-26 Trend	50% of 2023-26 Trend	25% of 2023-26 Trend
Annual operating income after tax per approved drug	$400 million	$400 million	$400 million	$400 million
EV/Operating income after tax	20	20	20	20
EV per approved drug	$8B	$8B	$8B	$8B
Expected # of approved drugs	73	70	65	61
Expected EV of approved drugs	$584 billion	$560 billion	$520 billion	$488 billion
Expected MC of approved drugs	$532 billion	$510 billion	$474 billion	$444 billion
% of current MC ($3.8 trillion)	14.0%	13.5%	12.5%	11.7%

[1] IQVIA. 2026. "Measuring Returns on Investment in Biopharmaceutical Innovation: The Changing Economics of Developing New Medicines 1991-2020."
[2] Damodaran Online. https://pages.stern.nyu.edu/~adamodar/
[3] Damodaran Online. https://pages.stern.nyu.edu/~adamodar/; EV/MC = ($4,158 billion / $3,787 billion) = 1.1; we assume debt and cash remain unchanged.

IV. Expected Financial Benefits of Potential Approved Drugs from Outbound Investment on Public Pension Funds

Public pension funds currently manage nearly $6.5 trillion in assets for more than 37 million people in the U.S., including active workers, retirees, beneficiaries, and inactive members entitled to future benefits. Public pension funds invest in both short-term (e.g., money market funds and short-duration bonds) and long-term assets (e.g., equities and long-duration bonds).[4] State and local pension funds invested approximately 42% of their assets (nearly $2.8 trillion) in equities, including biopharmaceutical companies.[5]

Public pension funds own biopharmaceutical companies both directly through their portfolios and indirectly through investments in other products, such as ETFs (exchange-traded funds). According to their 2025 SEC 13F filings, these funds hold about 4.5% of their public equity investments in biopharmaceutical companies.

In 2025, public pension funds held assets averaging $175,676 per person, of which $37,147 was in investment-grade fixed-income securities and $4,168 was in biopharmaceutical equities. The average annual return of public pension funds in the past ten years was 6.85%[6], generating an average investment return per public pension fund of $12,034 ($175,676 in assets per person x 6.85% average annual return).

Restricting outbound investment in Chinese biopharmaceutical companies could decrease the financial return on public pensions by $536 and $642 per person via two channels:

1. **Lower corporate bond yields**: Using the current 12% debt ratio in the U.S. biopharmaceutical industry,[7] we estimate that U.S. biopharmaceutical companies will issue between $13 billion and $16 billion in corporate bonds to finance outbound investment in China-headquartered biopharma licensing deals ($131 billion a year x 12%). Based on estimates of Treasury demand and yields,[8] we estimate that an increase of $13 billion and $16 billion in biopharma corporate bonds would raise investment-grade bond yields by 13 and 16 basis points. Consequently, a 13- to 16-basis-point increase in investment-grade bond yields would raise returns by $48 to $59 on a $37,147 investment in investment-grade bonds in each public pension fund account ($37,147 * 0.0016). The increase equals about 0.5% of the total annual investment return ($59 / $12,034).

2. **Lower biopharmaceutical stock values**: As shown above, the market capitalization of U.S. biopharmaceutical companies is expected to increase by between $444 billion and $532 billion, equivalent to 11.7% and 14.0% of the current market cap, resulting from approved drugs. Pension fund assets would increase by $488 and $583 per person ($4,168 in assets in biopharma stocks x 14% increase in market cap). The increase in biopharma stocks is approximately 4.8% of the annual return ($583 / $12,034 annual return).

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[4] Annual Survey of Public Pensions, Census, May 2026; https://www.census.gov/newsroom/press-releases/2026/2025-aspp.html

[5] Public Plans Data; https://publicplansdata.org/quick-facts/national/

[6] Public Plans Data; https://publicplansdata.org/quick-facts/national/

[7] Damodaran Online. https://pages.stern.nyu.edu/~adamodar/

[8] Ahmed, Rashad and Alessandro Rebucci. 2024. "Dollar reserves and US yields: Identifying the price impact of official flows." Journal of International Economics. https://www.sciencedirect.com/science/article/abs/pii/S0022199624001016

Overall, the impact of restricting U.S. outbound investment in China-headquartered biopharma companies could put between $20 billion and $24 billion in potential gains at risk for public pensions of 37 million Americans. (Table 2)

Table 2.
Expected Financial Benefits of Approved Drugs from Outbound Investment on Public Pension Funds

	Public Pension Funds
Total assets of public pension funds	$6.5 trillion
In fixed-income securities	$1.4 trillion
In public equities	$2.8 trillion
In biopharma equities	$0.154 trillion
Number of people in public pension funds	37 million
Average assets per account	$175,676
In fixed income	$37,147
In public equities	$74,462
In biopharma equities	$4,168
Average investment return per account	$12,034
Change in return in public pension funds per person due to outbound investment	$536 ~ $642
In fixed-income securities	$48 ~ $59
In biopharma equities	$488 ~ $583
As % of the average investment return per person	4.5% ~ 5.3%
Change in investment return in 37 million public pension funds	$19.8 billion ~ $23.8 billion

V. Expected Job Creation Due to Potential Approved Drugs from Outbound Investment

Using the estimates created in Section III, TEConomy Partners developed a forecast of the annual expected revenue due to approved drugs from outbound investment, which was then used to create an estimate of the number of new jobs above baseline[9,10] that would be created due to the increased revenue between 2027 and 2035.[11] Both direct biopharmaceutical jobs and total jobs (direct, indirect, and induced jobs) were estimated.

TEConomy estimates that continued outbound investment without restrictions would lead to the creation of up to 150,300 direct industry jobs and 518,700 total jobs in the U.S. by 2035. (Table 3) Restricting outbound investment would jeopardize the creation of these jobs.

[9] The baseline U.S. biopharmaceutical industry forecast is developed using U.S. Bureau of Labor Statistics Employment and Output Projections, 2025-2035 applied to TEConomy estimated 2025 industry employment.
[10] TEConomy Partners LLC. (October 2026). The Economic Impact of the U.S. Biopharmaceutical Industry: 2024 National and State Estimate; https://www.teconomypartners.com/wp-content/uploads/2026/10/The-Economic-Impact-of-the-U.S.-Biopharmaceutical-Industry-October-2026.pdf
[11] TEConomy Partners job impact analysis based upon NDP Analytics data and using IMPLAN 2024 U.S. Model.

Table 3.
Four Alternative Scenarios: Potential Changes in American Jobs from Outbound Investment

	100% of 2023-26 Trend	75% of 2023-26 Trend	50% of 2023-26 Trend	25% of 2023-26 Trend
Direct Biopharma Jobs	150,300	112,700	75,100	37,600
Total Jobs	518,700	389,000	259,400	129,700

Note: Estimates are for U.S jobs and rounded to the nearest hundred.

VI. Policy Implications

China-based biopharmaceutical companies have become an increasingly important source of emerging global drug innovation. Restrictions on U.S. outbound investment could disrupt these partnerships, and through 2030 could potentially reduce the number of innovative medicines developed and brought to American patients by between 61 and 73 new medicines.

The economic implications are also substantial. Under the assumptions used in this analysis, forgone drug development resulting from restrictions on U.S. investment in China-headquartered biopharmaceutical companies could result in market capitalization losses from $444 billion to $532 billion, equivalent to 12% to 14% of the industry's 2026 market value.

These losses would translate directly into the pension fund accounts of 37 million Americans, reducing their investment returns by between $20 billion and $24 billion. These losses would be in addition to the large losses accruing to private 401K and IRA accounts of millions of Americans.

In addition, by limiting new drug development and thereby constraining industry revenue, these restrictions are also expected to lead to a sustained loss of potential job creation, approximately 37,600 to 150,300 direct industry jobs and 129,700 to 518,700 total U.S. jobs by 2035.

These findings suggest that restrictions on U.S. outbound investment into China would not only have consequences for American patients through a reduction in the development of new medicines but would also reduce future revenues and weaken the financial performance of U.S. biopharmaceutical companies, putting downward pressure on company valuations and stock prices. These effects would extend to American jobs and investors, including pension funds and retirement accounts that hold biopharmaceutical stocks, while reducing resources available for future U.S. R&D and investment.