NORTHERN TRUST

Challenges and Choices

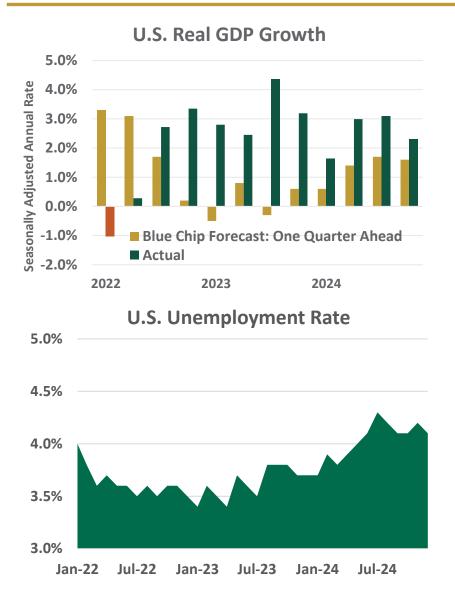
An Economic Outlook for the Balance of 2025

Carl Tannenbaum Chief Economist

March 2025

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2024 WAS A VERY GOOD YEAR



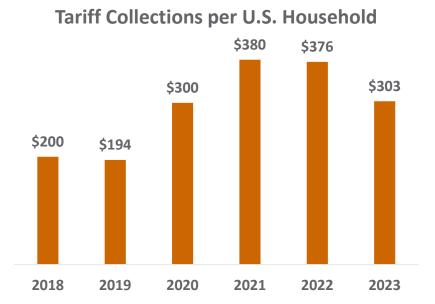
Key Messages

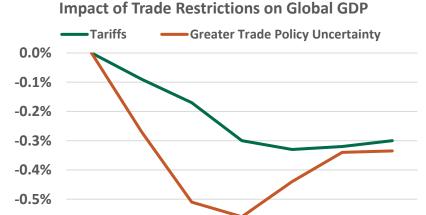
- Economic growth exceeded expectations
 - Well-rounded gains across personal consumption and business investment
 - U.S. economic progress has far exceeded that seen in other developed countries
- The labor market has moderated, but remains strong by historical standards
 - Unemployment is very low (4.0%)
 - Weather and strikes have made employment hard to measure, but gains continue
 - Job openings have moderated, but are still higher than prior to the pandemic
- Other positives:
 - Exceptionally strong equity markets
 - Monetary policy easing
 - Significant investment in long-term economic capacity

THEMES TO WATCH IN 2025

	Theme	Description	Consequences
P	Broken Links	Countries continue to pull away from one another, which will have negative implications for commerce and global security. Terms of trade are likely to tighten, international capital flows will recede, and export-led economies will struggle.	 Nationalist industrial policy Increased frequency/severity of restrictions and sanctions Reduced levels of productive investment Potential tail events
	Borrowed Time	Governments are flooding markets with bond issuance, testing investor appetites.	 Higher long-term rates Increased market volatility Potential for fiscal friction Elevated sovereign risk
∿ ⊾	Stepping Down	Interest rates in most developed countries are in retreat, but not synchronously. Central banks face two-way risk of policy error as they attempt to bring financial conditions back to a neutral standing. Friction with fiscal authorities may arise.	 Renewed yield-seeking Moderating debt service Currency realignment
	Pursuit of Productivity	AI has the potential to compensate for demographic deficits, but it raises a host of complications for countries and companies. New regulation is likely in some parts of the world, as is heightened public anxiety.	 Labor displacement Elevated cybersecurity risk Incremental climate risk

TARIFFS: A PRIMER





2028

2029

3030

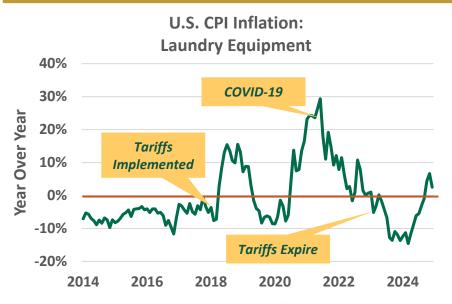
Key Messages

- Trump: Tariffs "the most beautiful word in the dictionary."
- Some truth about tariffs:
 - Countries don't pay tariffs; they act as a large tax increase on importing companies
 - Tariffs raise prices on the products affected; increments are phased in over time and peak after a year or two
 - The impact on overall inflation depends on the potential for substitution
 - Ultimately, consumers pay the cost; lower income households hardest hit
 - Tariffs almost always prompt retaliation, which diminishes growth and increases inflation on both sides
 - Tariffs are not a major revenue generator for governments
 - Uncertainty surrounding tariffs suppresses cross-border investment and global output

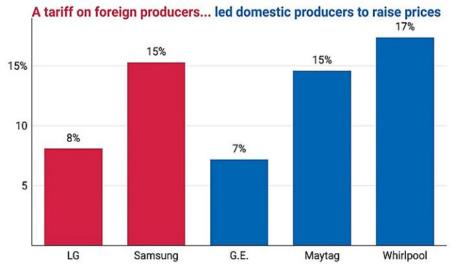
-0.6%

2024

AN INTERESTING TARIFF CASE STUDY



Change in price of washing machines following the Feb 2018 tariff on imported washers



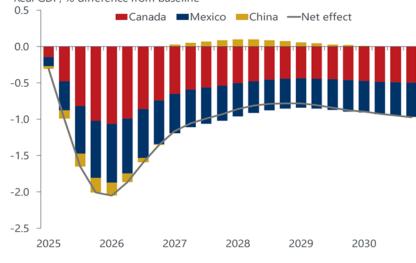
Key Messages

- Washing machine tariffs were implemented in 2018; ended in 2023
- Clear changes in the trajectory of prices when tariffs started and ended
- Domestic producers raised their own prices, as opposed to taking market share
- Little retaliation from South Korea
- Korean makers opened plants in the U.S.
 - Facilities were highly automated
 - About 1,800 jobs were created, with an average wage of \$47,000
 - The cumulative cost to American consumers of higher prices was estimated at \$1.5 billion
- Lesson learned: tariffs are essentially a tax on consumers that rarely have favorable cost/benefit dynamics

Sources: BLS, BEA, Haver Analytics, CATO Institute. Data as of January 2025. Investment Professional Use Only – Not for Distribution to the Public

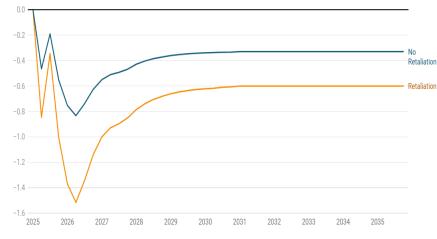
THE STATE OF PLAY

US: Impact from February 1 tariff threats by country Real GDP, % difference from baseline



Real GDP Level Effects of Illustrative "Reciprocal" Tariffs

Percentage point change against baseline

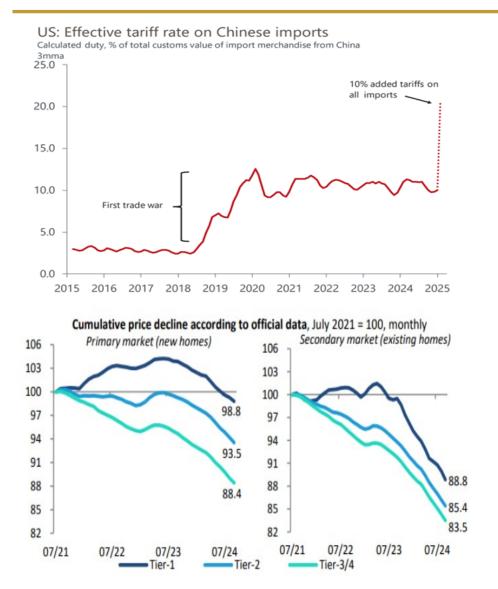


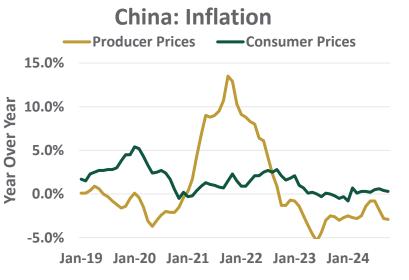
Source: Oxford Economics, Yale University Budget Lab. Data as of February 2025. Investment Professional Use Only – Not for Distribution to the Public

Key Messages

- Tariffs against all Chinese products will be increased by 10%
 - China has responded with targeted countermeasures
- Tariffs of 25% on U.S. imports of steel and aluminum have been announced
- Tariffs against Canada and Mexico have been threatened
 - Over one-quarter of American imports and exports travel immediately north and south
 - Trying to prompt action on immigration and interdiction
- > A deferral of these measures expires on March 4
- Another phase involves "reciprocal" tariffs
 - Countries/regions tax American imports at higher rates (tariffs + VATs)
 - Level-setting would be a substantial undertaking
 - Impact is over \$1,000 per household per year
- If fully realized, the impact of proposed tariffs could cause a recession and add more than 2% to annual inflation

CHINA WILL BE THE BIGGEST LOSER



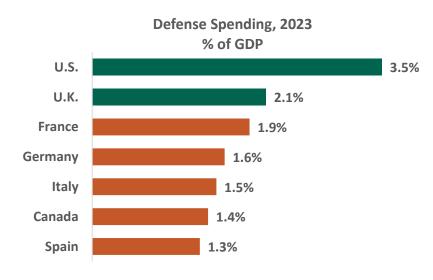


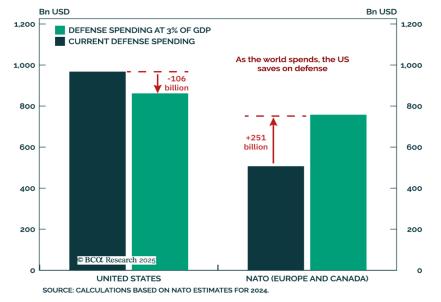
Key Messages

- China is facing a series of headwinds
 - Slowing exports, increasing trade friction
 - Sluggish domestic consumption
- Property sector correction
- Local government/banking solvency
- Deflation risk
- Additional U.S. tariffs and pressure on others to disengage will add degrees of difficulty

Sources: Oxford Economics, WIND, China General Administration of Customs, Haver Analytics, CEIC, Autonomous. Data as of February 2025. Investment Professional Use Only – Not for Distribution to the Public

THE OVERLAP OF SECURITY



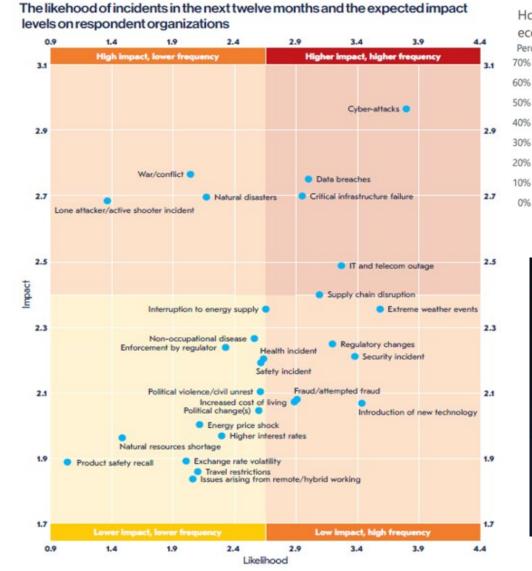


Key Messages

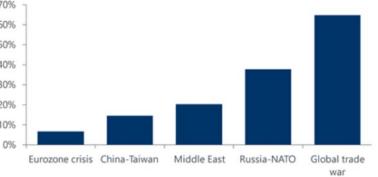
- A first principal: peace is very good for economic growth and fiscal balance
- The United States spends a much greater share of its GDP on defense that other Western countries
 - Part of this goes toward augmenting the defense of NATO partners
- After the Russian invasion of Crimea in 2014, NATO countries signed a pledge to spend 3% of their GDP annually on defense by 2024
 - Some only met this target at the very last minute, and several are still not in compliance
 - Trying to prompt action on immigration and interdiction
- The White House appears to be seeking a re-set in relations with Western Europe
 - NATO allies are planning to become more selfsufficient in defending themselves
 - This is going to be an expensive endeavor, at a time that budgets in Europe are stretched
- > Geopolitical uncertainty is on the upswing

Sources: NATO, BCA Research. Data as of February 2025. Investment Professional Use Only – Not for Distribution to the Public

TOP GEOPOLITICAL RISKS FOR 2025



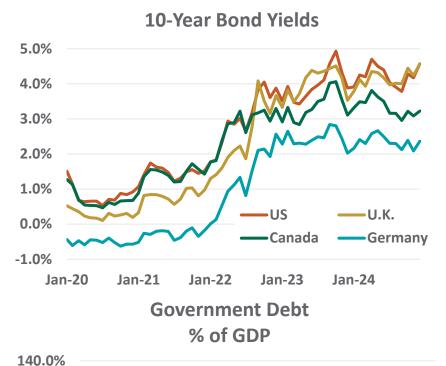
How serious are the following geopolitical risks to the global economy over the next two years? Percentage of Global Risk Survey respondents citing as very significant

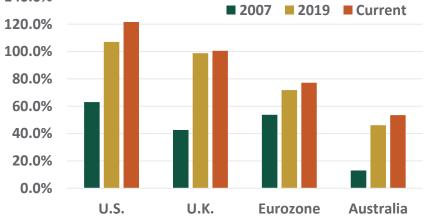




Sources: Business Continuity Institute, Oxford Economics, Eurasia Group. Data as of January 2025. Investment Professional Use Only – Not for Distribution to the Public

FISCAL FRICTION



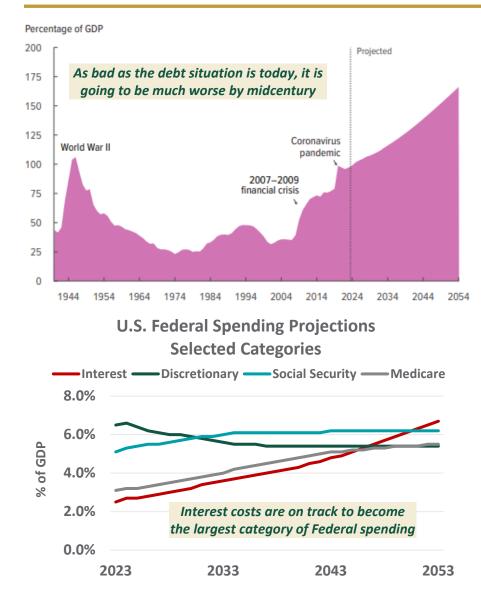


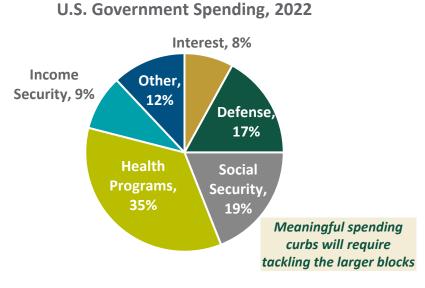
Key Messages

- After a long period of low interest rates, yields have returned to more normal levels
 - Central banks have been raising rates and reducing their balance sheets
 - Budget deficits remain deep; legislatures can't agree on how to control spending
- Government borrowing costs are rising rapidly
 - Debt has increased immensely over the past fifteen years (and especially over the last two years)
 - Much of it has been funded with shortterm instruments
 - Interest costs are absorbing increasing amounts of government revenue
 - This may limit the amount of stimulus that can be applied if recession arrives
- Stress within governments and between governments and central banks will likely increase in the years ahead

Sources: Bloomberg, Haver Analytics. Data as of January 2025. Investment Professional Use Only – Not for Distribution to the Public

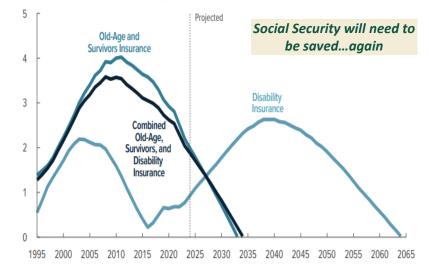
U.S. FISCAL REALITIES





Social Security Trust Fund Ratios

Ratio of trust fund balance to scheduled payments



Sources: CBO, FRB San Francisco. Data as of August 2024. Investment Professional Use Only – Not for Distribution to the Public

RECONSIDERING THE FEDERAL RESERVE



U.S. Core Inflation

Key Messages

- Inflation is proving stubborn
 - Recent months have seen slight increases in year-over-year readings
 - Growth has been strong, stressing economic capacity
 - Tight housing and labor markets limit prospects of disinflation in services
- The Fed's perceived risks to the inflation outlook have shifted significantly
 - The FOMC is much less comfortable with the outlook for prices
- The December interest rate cut may be the last one for a while
 - Key question: will tariff and immigration policy have a bigger impact on inflation or growth?
- We do not think there will be another until after midyear



Dec-24

Feb-25

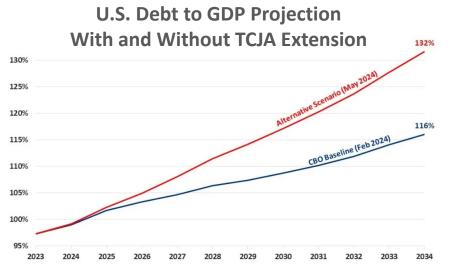
Oct-24

3.00%

2.50%

Aug-24

"RECONCILING" U.S. BUDGET PRIORITIES



How Might Congress Reduce the Cost of a Tax Bill?

Several options for "real" offsets, with shortening the length of TCJA extension used to plug any gap.

"Real" Offsets	Savings (\$BN, 10-Year)
Spending Cuts	
Non-Defense Discretionary (gradual ramp to 30% cut)	\$1,500
Medicaid (caps, FMAP tweaks, work requirements, eligibility checks)	\$600
SNAP (TFP tweaks, work requirements)	\$50-100
Changes to Biden Administration Policies	
Repeal Costly Biden Administration Rulemakings (e.g., student loans)	TBD, depends on executive action and litigation
Tweaks to Inflation Reduction Act (but not full repeal)	\$100-300
Make Specific TCJA Parameters Less Generous (illustrative, not exhaustive)	
Cut Standard Deduction by 5%	\$250
Let Some Current Business Tax Parameters Remain In Effect*	\$240
Total:	~\$2.7-3T

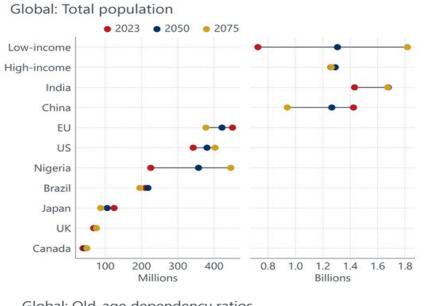
Other Cost Reduction Approaches	Savings (\$BN)
Extend TCJA for Less than 10 Years	\$400-500B / Year Less Than 10
*For example, leave cap on interest deductibility at 30% of EBIT (rather than reverting to EBI' to change in 2026 as currently scheduled.	TDA) and/or allow international tax parameters (BEAT/GILTI/FDII)

Key Messages

- Work is underway to complete the Federal budget for fiscal year 2025 (which began last October)
 - Spending authorization needed through next September
 - Considering an increase in the debt ceiling
- Long-term priorities to be considered in a "reconciliation" bill
 - Must not increase the annual deficit at the end of a ten-year window
 - Extensions of tax cuts must be paid for with spending reductions or enhancement of other revenues
 - Tariff income generated through executive orders cannot be used as an offset
- Can DOGE deliver?
 - Commissions to rein in spending are not new
 - Recommendations for efficiency often founder because of political reality

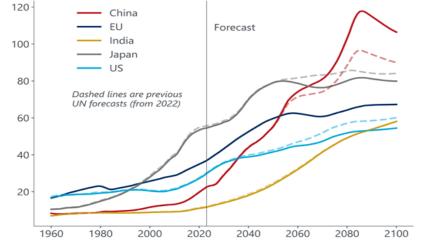
Sources: Congressional Budget Office, Committee for a Responsible Federal Budget, Evercore ISI. Data as of January 2025. Investment Professional Use Only – Not for Distribution to the Public

2025 THEME: PURSUIT OF PRODUCTIVITY





%, (persons aged 65+) / (persons aged 20 to 64)

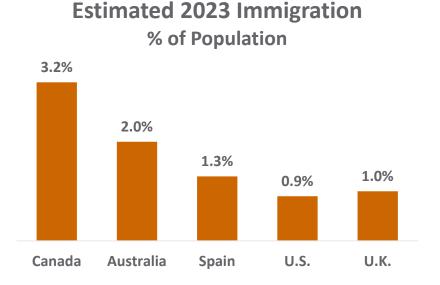


Sources: United Nations. Oxford Economics. Data as of November 2024. Investment Professional Use Only - Not for Distribution to the Public

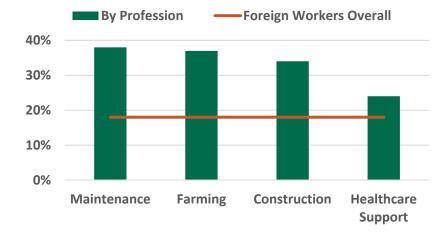
Key Messages

- Many developed countries have a demographic challenge
 - Birth rates struggling to match "replacement" level
- Consequences of stagnant population:
 - Worker shortages, lower potential growth
 - Imbalances in public and private retirement systems
 - Reduced levels of innovation and risktaking
 - Harder to sustain debt levels
- Several countries have seen a substantial surge in immigration during the past two years
 - Not all has been lawful
 - Many feel the current level is too high; the ability to assimilate has been strained
 - More sensible controls needed
 - Economic and political instability around \succ the world will likely keep this issue in the forefront

THE IMMIGRATION PICTURE



U.S. Occupations Where Foreign Workers Are Overrepresented



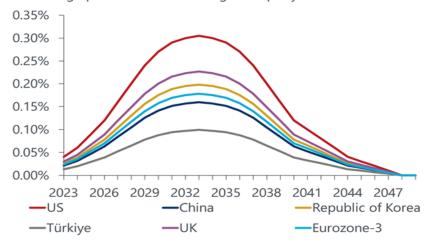
Key Messages

- Newcomers balance demographic profiles
 - They skew younger, and have larger families
 - Tendency to invention and entrepreneurship
 - Alleviating labor market shortages
- A range of countries have experienced huge surges in immigration; not all of it has been legal or orderly
 - Stress on housing and public services
 - Challenging to national identities
 - A source of deep political division
- Climate change, war, and oppression may keep the flows coming
 - Diminished ability of poor countries and international organizations to manage migration
 - Interdiction and deportation will require additional resourcing
- Balancing the social, economic, and political aspects of immigration will be very difficult

Sources: BLS, Haver Analytics, National Statistical Agencies, Corinna Advisory. Data as of December 2024. Investment Professional Use Only – Not for Distribution to the Public

CAN AI OVERCOME THE DEMOGRAPHIC DEFICIT?

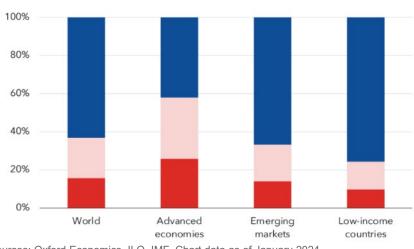
World: Productivity boost from AI, central scenario Percentage point addition to TFP growth per year from AI



High exposure, high complementarity

Employment shares by AI exposure and complementarity

Low exposure



Sources: Oxford Economics, ILO, IMF. Chart data as of January 2024. Investment Professional Use Only – Not for Distribution to the Public

Key Messages

- We may have crossed an important threshold with artificial intelligence
 - Natural language processing, along with advanced machine learning
 - Immense amounts of investment into the sector
 - A broad range of potential applications
 - Substantial potential for productivity improvement
- Impact on labor markets
 - Highly variable across occupations and nations
 - Will compensate for aging populations, but some displacement is inevitable
- Issues for implementation
 - Security/ethics/fraud
 - Power needs
 - Potential privacy and anti-trust regulation surrounding the sector (U.S. and overseas)
- At once exciting and concerning \geq

OUR LATEST FORECASTS

• U.S.: Commentary here

	2024	2025		2026			Q4 to Q4 change			Annual change					
	24:4a	25:1f	25:2f	25:3f	25:4f	26:1f	26:2f	26:3f	26:4f	2024a	2025f	2026f	2024a	2025f	2026f
Real Gross Domestic Product (% change, SAAR)	2.3	1.9	1.9	1.8	2.1	2.1	2.0	2.0	1.9	2.5	1.9	2.2	2.8	2.3	2.1
Consumer Price Index (% change, annualized)	3.0	2.7	2.6	2.6	2.8	2.7	2.7	2.6	2.6	2.7	2.7	2.6	3.0	2.6	2.7
Civilian Unemployment Rate (%, average)	4.1	4.2	4.3	4.3	4.2	4.2	4.2	4.1	4.1				3.6*	4.0*	4.3*
Federal Funds Rate	4.69	4.38	4.38	4.34	4.13	4.13	3.88	3.88	3.63				5.05*	5.19*	4.31*
2-yr. Treasury Note	4.15	4.29	4.42	4.36	4.30	4.27	4.08	4.06	4.03				4.58*	4.37*	4.34*
10-yr. Treasury Note	4.28	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60				3.96*	4.21*	4.60*
a=actual															

f=forecast

*=annual average

Global: Commentary <u>here</u>

Global Real GDP Forecasts

4Q/4Q Change

	2025	2026
Canada	1.5%	1.8%
Eurozone	0.7%	1.0%
United Kingdom	1.2%	1.3%
Japan	1.0%	1.1%
China	3.5%	3.1%
Australia	2.0%	2.5%

BIOGRAPHY



Carl R. Tannenbaum Chief Economist Northern Trust

Carl Tannenbaum is the Chief Economist for The Northern Trust. In this role, Mr. Tannenbaum briefs clients and colleagues on the economy and business conditions, prepares the bank's official economic outlook and participates in forecast surveys. Mr. Tannenbaum publishes weekly commentaries and is frequently interviewed by media outlets such as The Wall Street Journal, Bloomberg, and Reuters.

Mr. Tannenbaum was the recipient of the 2021 Lawrence Klein Award, granted by the Blue Chip Economic Consensus to the contributor with the best forecasting record over the prior four years.

Mr. Tannenbaum is also responsible for the analytics and modeling group within Northern Trust's risk management division, and he monitors the strategic risks facing the organization. He is a member of the bank's capital committee, its investment policy committee, and the asset/liability management committee.

Prior to joining Northern Trust, Mr. Tannenbaum spent four years at the Federal Reserve, where he led the risk section. He was deeply involved in the central bank's response to the 2008 financial crisis, helped to create and conduct its stress testing program, and advised senior Federal Reserve leaders on developments in banking and the financial markets.

Mr. Tannenbaum began his career in banking at LaSalle Bank/ABN AMRO, a global banking organization with \$1 trillion in total assets. He served for more than 20 years there as the organization's Chief Economist and Head of Balance Sheet Management.

Mr. Tannenbaum is the current Chairman of the International Conference of Commercial Bank Economists and a past Chairman of the National Association for Business Economics, the Conference of Business Economists, the American Bankers Association's Economic Advisory Committee, and the North American Asset/Liability Management Association.

Mr. Tannenbaum holds an M.B.A. and a B.A. in finance and economics from the University of Chicago.

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