

Global Trade Shocks and Exchange Rate Effects on Pharmaceutical Reference Pricing: Implications of EU Stimulus for U.S. MFN Policy

Noman Paracha¹, Volkan Beykoz², Danilo DiMaio³, Bill Padula⁴

¹Quantic School of Business and Technology, ²Menarini, Basel, Switzerland ³F. Hoffmann-La Roche Ltd, Basel, Switzerland, ⁴Stage Analytics, California, USA

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INTRODUCTION

- U.S. "Liberation Day" tariffs (April 2025): 10% baseline + 20% on EU, affecting \$380B in EU exports (70% of total)
- Anomalous currency response:** EUR appreciated 12.3% vs. USD in 2025 (1.02→1.16), contrary to typical tariff impacts
- U.S. MFN policy (EO 14297, May 2025) references lowest prices from OECD countries with GDP per capita \geq 60% of U.S.
- Reference basket:** 16-25 predominantly EU countries (12 of 16 use EUR; 15 of 20 with PPP adjustment use EUR)
- Current price differential:** U.S. pharmaceutical prices are 278% of OECD comparator countries (322% for brand-name drugs)
- Existing MFN analyses assume stable exchange rates and static EU pricing—assumptions challenged by 2025 events
- Research gap:** Intersection of tariffs, EU fiscal responses, and currency dynamics creates unexplored policy feedback loops

METHODS

- Conceptual framework:** GDP identity ($GDP = C + I + G + [X - M]$) to trace EU compensation for export losses
- Three-layer analysis:**
 - Layer 1: Documented EU fiscal stimulus measures (focus: Germany's €1T package)
 - Layer 2: Dual pharmaceutical pricing pressures (demand expansion vs. cost containment)
 - Layer 3: Exchange rate transmission effects on USD-equivalent reference prices
- Evaluated new EU HTA Regulation (effective January 2025) with JCAs impacting pricing harmonization
- Calculated USD-equivalent prices under EUR appreciation scenarios to model MFN benchmark impacts
- Data sources:** U.S. CBP/White House (tariffs), OECD/RAND/IQVIA (pricing), European Commission (fiscal policy), HHS/CMS (MFN policy)
- Key limitation:** Net prices not systematically available; analysis uses list prices as proxy
- Dynamic policy environment limits long-term projection certainty

RESULTS

- Germany's fiscal response:** €500B infrastructure fund (12 years) + €120B/year defense, with explicit healthcare/hospital allocations
- EU-wide impact:** Defense spending increase from 1.4%→3% GDP by 2030 (~€250B/year), creating budgetary trade-offs
- Dual pricing pressures identified:**
 - Upward: Fiscal stimulus, healthcare expansion, increased access/demand
 - Downward: EU HTA Regulation (JCAs starting Jan 2025), centralized procurement, stricter cost containment
- Q1 2025 pricing data:** 19.8% increase in EU price changes vs. Q1 2024; France & Germany account for 91% (both link prices to HTA)
- Currency amplification effect:** 12.3% EUR appreciation means EUR prices must decline $>12.3\%$ just to maintain USD-equivalent stability
- Critical threshold:** Stable EUR pricing = +13.7% USD-equivalent increase; modest +5% EUR increase = +19.9% USD increase
- MFN basket concentration:** 75% of reference countries experiencing currency appreciation vs. USD (Eurozone, Norway, Sweden, Switzerland)

FIGURE 1 Timeline of Tariffs, Currency Appreciation, and MFN Policy

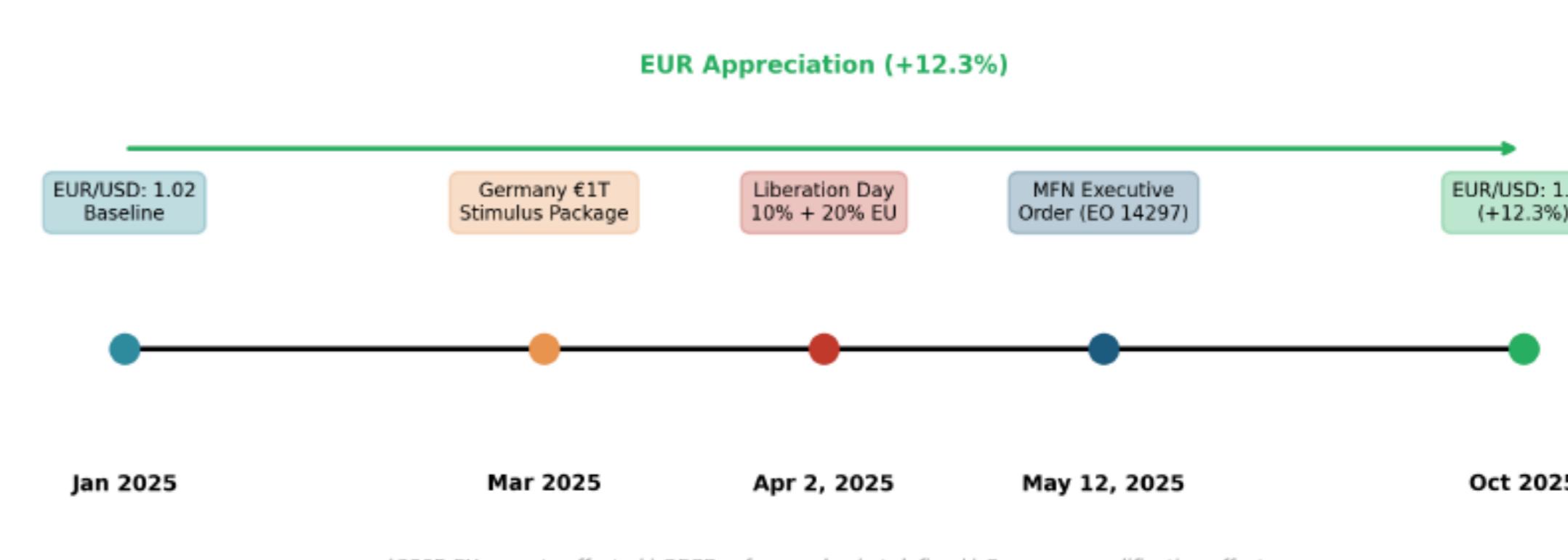
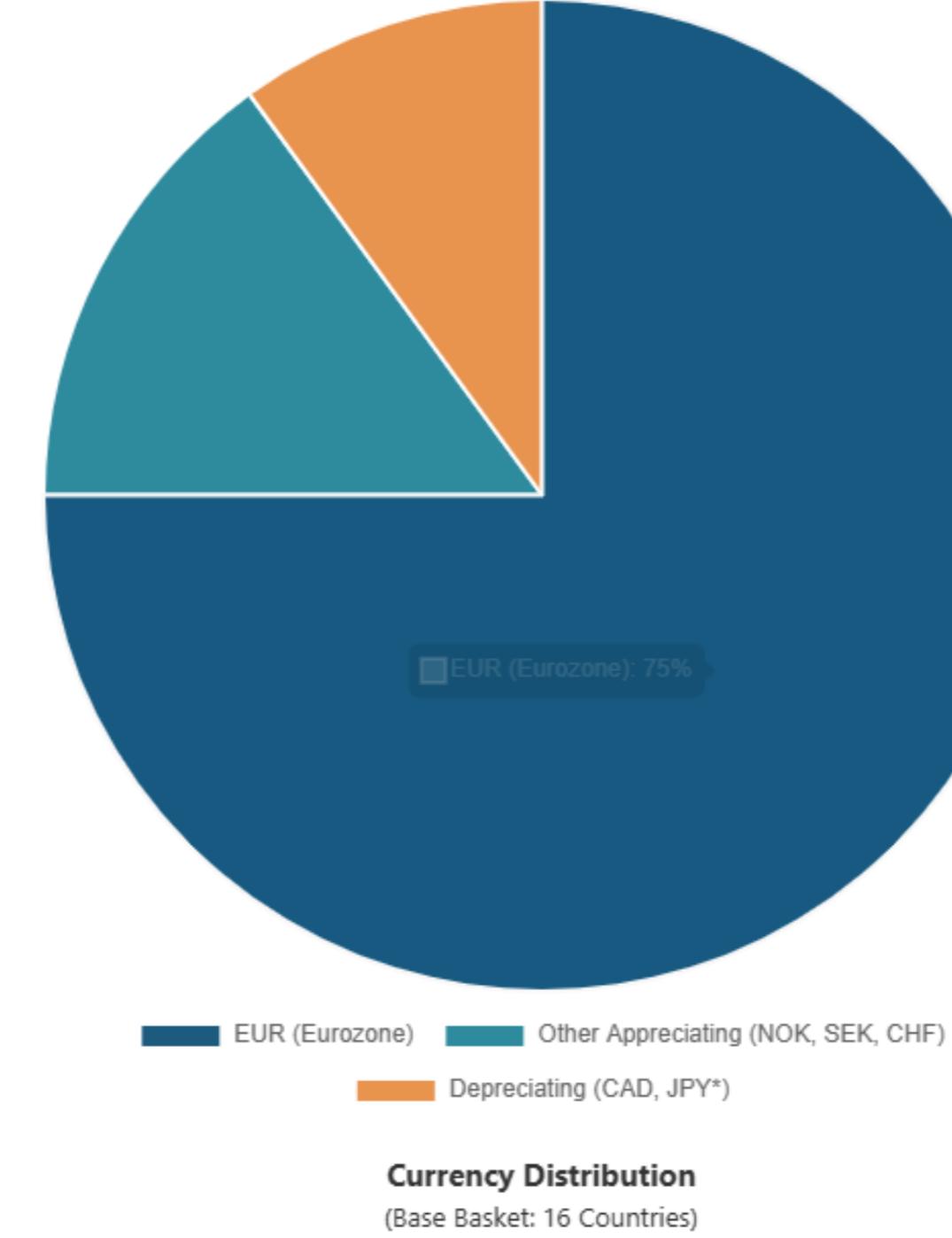


FIGURE 2 MFN Reference Basket Currency Exposure



EUR Countries (12):
• Luxembourg • Austria
• Ireland • Sweden
• Netherlands • Belgium
• Germany • Finland
• Denmark • France*
• Iceland • Italy*

Other Appreciating (3):
• Switzerland (CHF)
• Norway (NOK)
• Sweden (SEK)

Depreciating (2):
• Canada (CAD)
• Japan (JPY)*

*With PPP adjustment only

Key Finding: 90% of MFN reference basket experiencing currency appreciation vs USD. EUR appreciation (+12.3%) dominates basket, systematically biasing benchmarks upward.

TABLE 1 Currency Amplification Effect on MFN Reference Prices

| Scenario | EU Policy Response | EUR Price Change | EUR/USD Rate | USD-Equivalent Change | MFN Impact |
|----------------------|--------------------|------------------|--------------|-----------------------|---------------|
| Baseline 2024 | Pre-tariff | 0% | 1.02 | Baseline (100) | Reference |
| Strong Containment | Cost controls | -10% | 1.16 | +2.0% (102) | Minimal ↑ |
| Moderate Containment | Balanced | -5% | 1.16 | +7.8% (108) | Net ↑ |
| Status Quo | No change | 0% | 1.16 | +13.7% (114) | Substantial ↑ |
| Stimulus-Driven | Demand expansion | +5% | 1.16 | +19.9% (120) | Major ↑ |

Key Insight: EUR prices must decline $>12.3\%$ to achieve any USD-equivalent reduction in MFN reference benchmarks. Currency appreciation amplifies all EUR price movements when converted to USD.

CONCLUSION

- Complex dynamics:** Tariff policy + EU fiscal responses + currency appreciation create non-linear effects that challenge MFN policy assumptions
- Currency as critical multiplier:** EUR appreciation creates powerful headwind—expected 30-80% U.S. price reductions may be substantially diminished or reversed
- Government-specific heterogeneity:** EUR drug price trajectories depend on each nation's balance of healthcare expansion vs. cost containment priorities
- MFN effectiveness at risk:** USD-equivalent reference prices may increase despite EU cost containment, as currency effects dominate
- Policy implications:** U.S. MFN policy requires currency adjustment mechanisms; simple international price comparisons insufficient without macroeconomic context
- EU positioning:** Currency appreciation may temporarily shield EU from U.S. pressure to raise prices, but creates pricing complexity
- Need for integrated modeling:** Effective pharmaceutical pricing policy must simultaneously consider macroeconomic, regulatory, financial, and strategic factors