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U.S. Competitiveness and External Debt: Some Overlooked Aspects of the Crisis in the 'American Order'

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ABSTRACT

In the prevailing analyses of the crisis of the so-called American-led world 'order', one topic has been quite neglected: the impact of price competitiveness on the U.S. current account and the related International Investment Position. Despite the relevance of valuation changes, we argue that current account dynamics remain relevant to U.S. International Investment Position, with the real exchange rate influencing both flows and stocks. Drawing upon and refining Milesi-Ferretti's framework, we explicitly incorporate the real effective exchange rate into the analysis, in order to show that a decline in price competitiveness could be one of the factors underlying the deterioration of the U.S. external accounts. This link could be one of the neglected factors behind the protectionist turn of the United States and the related crisis of the American-led 'order'.

JEL Classification: F02, F32, F34

1 | Introduction

In a debate with one of the authors of this paper, former Governor of the Bank of Italy and ECB board member Ignazio Visco stated: 'The US net position has indeed worsened, but this is due to an appreciation of the dollar and an increase in stock values. However, this seems to reflect the strength of the US economy at this time, not its weakness'. In the same discussion, Visco argued that the U.S. shift towards protectionism depends not so much on foreign debt problems as on a failure to redistribute the gains of globalization, which has penalized American industrial workers in particular (Brancaccio and Visco 2024). Visco supports his position by referring to Milesi-Ferretti, who states that the deterioration of the U.S. external debt contained in the Net International Investment Position depends essentially on 'valuation changes' which are dictated by the growth of the stock market and the value of the dollar: in other words, by elements that are not weaknesses but relative strengths of American capitalism (Milesi-Ferretti 2024; Lane and Milesi-Ferretti 2018).

The positions of Visco and Milesi Ferretti summarize well an idea that has been quite widespread among economists in recent years, in more or less explicit terms. Of course, everyone is aware of the peculiar position of the United States' external accounts: from the early 1990s to today, the Current Account (CA) has been persistently negative, peaking at 6% of GDP in 2006 and showing a marked deterioration that has intensified again since 2019; and a continuously worsening of the external debt contained in the Net International Investment Position (NIIP), reaching a negative record of 90% of GDP in 2024. There is also awareness that since the Great Recession of 2009, the U.S. Real Effective Exchange Rate (REER) has steadily increased, with a deterioration in competitiveness of about 24 percent. Nonetheless, the mainstream view among economists has remained essentially the same: that, ultimately, the United States does not have a serious external debt problem and that, in any case, the trends in the U.S. external accounts do not depend on a decline in American competitiveness. Perhaps the most authoritative example of this

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prevailing position is given by the IMF, according to which the U.S. external position is 'broadly in line with the level consistent with medium-term fundamentals and desirable policies' (IMF 2024).

Building on arguments already put forward in the debate with Visco, our paper aims to question this still widespread opinion among economists. Without trying to investigate the so-called 'sustainability' of the United States' position from the perspective of its 'fundamentals', we intend to pursue a relatively more limited objective. In what follows, we will argue two essential propositions: that current account flows are still relevant in determining the international investment position of the United States, and that the current account and international investment position are both linked to the trends in the real effective exchange rate. In this way, we will suggest that a decline in the competitiveness of the U.S. economy could be one of the possible explanations of the deterioration of U.S. external accounts and it might also represent one of the factors behind the American turn from globalism to protectionism. In this way, the issue of the crisis of the so-called American 'order' could be reinterpreted in light of a 'tendency' rooted in some structural elements of economic relations (Acemoglu and Brancaccio 2021; Brancaccio and De Cristofaro 2024). Among other things, this interpretation would even be in line with the arguments put forward in an appeal on 'the economic conditions for peace', promoted by Robert Skidelsky and one of the authors of this paper, published in the *Financial Times* and *Le Monde* (Brancaccio et al. 2023), which was the starting point for the debate with Governor Visco (on this subject, see also: Skidelsky 2011; Patalano 2019).

This study takes inspiration from the general literature on current account dynamics (Obstfeld and Rogoff 1996; Kim and Roubini 2008; Blanchard and Milesi-Ferretti 2012; Lane and Milesi-Ferretti 2012). Our focus, however, will be the U.S. external imbalances and their relationships with real exchange rate dynamics. To the best of our knowledge, this issue remains rather underexplored in the empirical economic literature, with only a few contributions addressing it marginally. Among these exceptions, it is worth mentioning Duncan (2016), who assess the cyclicality of the U.S. current account using nonparametric estimation techniques and provides a parametric estimation showing a negative correlation between the real exchange rate and the current account. Limited evidence is also provided by Batdelger and Kandil (2012), who apply the bounds testing approach (Pesaran et al. 2001) indirectly confirm the existence of a negative long-run impact of the real exchange rate on the current account by using the nominal exchange rate and controlling for the U.S. GDP deflator and energy prices. Similarly, Chiu et al. (2010), employing a panel cointegration framework, find a long-run negative relationship between U.S. bilateral trade balances and the real exchange rate. Further back in time, Kandil and Greene (2002) study the relation between U.S. current account and the REER but do not provide commonly used unit-root, they use a relatively short sample and apply an Engle-Granger two-step estimator (on the relevance of exchange rate as a determinant of current account in EU and OECD countries in panel frameworks see Afonso and Rault 2008; Belke and Dreger 2013; Gossé and Serranito 2014; on international imbalances related to labour costs, see: Tridico 2012). Beyond the few contributions just cited, research in recent years has substantially neglected the link between price competitiveness and the performance of American external accounts. We try to fill this gap in the following ways.

First of all, we provide an estimate of the long and short run relationship between U.S. current account and the real effective exchange rate though an Error Correction Model, based on the idea that U.S. price competitiveness affects U.S. current account dynamics. Then, we move another step further with respect to the existing literature and try to reconcile this evidence to the vast debate on the relevance of current account in determining the international investment position in presence of valuation changes (see Gourinchas and Ray 2007; Obstfeld 2012a, 2012b; Lane and Milesi-Ferretti 2001, 2018). In this respect, our research is largely motivated by a recent contribution by Milesi-Ferretti (2024) quoted in the debate between Brancaccio and Visco (2024). Recent trends in academic research tend to consider the U.S. external debt as prominently determined by variations in stock prices and exchange rates implying little relevance of the current account flows in the build-up of the U.S. external debt stock (Lane and Milesi-Ferretti 2018, 2024; Beckmann and Czudaj 2020; Atkeson et al. 2025), suggesting, therefore, that the U.S. NIIP is significantly less negative than the persistent current account deficits alone would suggest. As emphasized by Obstfeld (2012a), however, even in a world where valuation changes play a major role in shaping net external positions, the current account continues to provide essential information on the build-up of external imbalances. We show here that Obstfeld's thesis also applies to the situation in the United States. Finally, we refine and extend a panel regression proposed by Milesi-Ferretti (2024) by explicitly incorporating the real exchange rate, in order to examine the relevance of competitiveness in the dynamics of the net foreign asset position controlling for such valuation changes. Of course, the possible link between relative prices and the United States' external accounts may be influenced by numerous factors, not least a potential shift in the dollar's role as an international reserve currency. Here we will analyse only a few of these aspects, reserving further discussion for a future occasion. In any case, while we do not intend to claim here that the deterioration of competitiveness is the ultimate cause of the U.S. flows and stocks external imbalances, we will argue that it should be considered as a non-negligible factor to which the relevant literature could pay a little more attention.

This article is organized as follows. Section 2 examines the connection between U.S. competitiveness and the current account with an ARDL/ECM approach, providing robust evidence on an alternative, under-explored interpretation of the large and persistent imbalances in U.S. external trade flows. Our findings provide early evidence that deterioration of external debt flows are a by-product of U.S. structural weaknesses in terms of price competitiveness. Prior to evaluating whether these weaknesses also extend to external debt stocks, Section 3 reviews the composition of the U.S. NIIP—distinguishing financial transactions from valuation changes—and provides evidence that the contribution of valuation changes to a persistently negative net position can be downplayed, or at least questioned, thereby reasserting the importance of the current account in the building-up of external debt position. Section 4 refines Milesi-Ferretti's empirical strategy to

challenge the prevailing view that valuation gains drive U.S. NIIP dynamics—in particular, that the strength of U.S. financial markets, reflected in equity gains and a strong dollar, translates into valuation movements that primarily underlie its deterioration. Our findings complete our argument showing that even after accounting for valuation changes, the historical rise in U.S. external debt seems to be largely driven by a weaknesses in price competitiveness rather than the strength of U.S. economy. Section 5 concludes.

2 | External Imbalances and Competitiveness: A Time Series Approach

The first step of our analysis will be to assess a largely and unreasonably under-explored interpretation of the large and persistent imbalances in U.S. external trade flows. Based on the considerations mentioned above, in this section, we analyse the dynamic relationship between the U.S. current account balance and the real effective exchange rate, as a proxy of price-competitiveness, while accounting for a set of relevant control variables.

We begin by presenting the variables employed in the empirical analysis along with their data sources. The dependent variable is the current account (CA), measured as a percentage of U.S. GDP. Among the explanatory variables, the main variable of interest is the real effective exchange rate (REER; also adopted, among others, by Kim and Roubini 2008; IMF 2017; Bertsatos 2022). Additional controls include the terms of trade adjustment relative to real GDP (ToT), real GDP (RGDP), the trade openness relative to real GDP (TradeOp) and the fiscal balance (FB), defined as general government net lending/borrowing as a percentage of GDP. All variables are sourced from the World Bank database, except for CA, which is retrieved from the IMF database, and REER, which is obtained from the OECD. The latter choice is motivated by the fact that the REER series from the IMF is available only from 1980 onward, whereas the OECD series offers a longer time span. The final sample covers annual observations from 1970 through 2023. We used logarithmic transformations for REER, RGDP, and TradeOp.

To assess whether U.S. external imbalances and competitiveness present a statistically significant relationship across time, we estimate an Error Correction Model (ECM), which enables us to distinguish between short and long-run effects of the explanatory variables on the current account while assessing the existence of a cointegrating relationship between them. On this point, it is worth recalling that standard cointegration techniques, such as the Engle-Granger or Johansen approaches, require that all variables in the model be integrated of order one I(1), and are therefore unsuitable when stationary I(0) variables are included. To account for the possibility of borderline stationary variables, we adopt the ARDL bounds testing procedure developed by Pesaran et al. (2001), which allows for the inclusion of both I(0) and I(1) variables within an ARDL framework (the same approach for U.S. current account dynamics is adopted by Batdelger and Kandil (2012)). However, this method is not valid in the presence of variables integrated of order two I(2), as the asymptotic distribution of the test statistic and its associated critical values are not defined in that case. Accordingly, unit root tests are performed in advance to ensure that none of the variables are I(2). Results are presented in Table 1.

TABLE 1 | Stationarity tests.

	ADF (no trend)	ADF (trend)	PP (no trend)	PP (trend)
Level				
CA	0.3225	0.4546	0.3909	0.6019
REER	0.0079	0.0606	0.0836	0.3867
ToT	0.9901	1.0000	0.9847	1.0000
RGDP	0.5695	0.7558	0.4978	0.8179
TradeOp	0.0325	0.1264	0.0629	0.3215
FB	0.0387	0.0248	0.0661	0.0644
Difference				
ΔCA	0.0018	0.0121	0.0000	0.0000
ΔREER	0.0008	0.0048	0.0002	0.0010
ΔToT	0.0002	0.0000	0.0000	0.0000
ΔRGDP	0.0000	0.0001	0.0000	0.0000
ΔTradeOp	0.0000	0.0000	0.0000	0.0000
ΔFB	0.0000	0.0000	0.0000	0.0000

Note: Further stationarity analyses yielded consistent findings. The KPSS test on level series indicates that all variables exhibit a unit root at the first lag, with the sole exception of REER, while the Zivot–Andrews test confirms non-stationarity for all level series. In contrast, when applied to first differences, both KPSS and Zivot–Andrews tests uniformly confirm that all of the differenced variables are stationary. REER, RGDP and TradeOp are in logarithmic term.

Since all the tests provide no evidence of any I(2) process among the variables we are allowed to proceed with the bounds testing.

To investigate the existence of a long-run equilibrium relationship among the variables, we apply the bounds testing procedure proposed by Pesaran et al. (2001). The first step in our approach is to estimate an autoregressive distributed lag (ARDL) model, for which we used Akaike Information Criterion (AIC) to select the optimal lag structure. Once the appropriate ARDL specification is identified, the model can be reparametrized into an unrestricted error correction model, which explicitly separates short-run dynamics from the long-run equilibrium relationship. The estimated ECM general form will be therefore:

$$\Delta y_t = \alpha_0 + \sum_{j=1}^{m} \sum_{k=1}^{p_j} \alpha_{j,k} \Delta X_{j,t-k} + \sum_{j=1}^{m} \beta_j X_{t-1} + \varepsilon_t$$

where y_t denotes the dependent variable, $X_{j,t-k}$ is the set of the k explanatory variables, p_j represents the number of lags considered for each explanatory variable in the short-run dynamics, and ε_t is the error term. The bounds test is then performed by testing the joint significance of the lagged level variables in the ECM using an *F*-statistic. The result is compared against a set of critical values that

allow for uncertainty regarding whether the regressors are I(0) or I(1). If the long run relationship is confirmed, the reparametrized ECM becomes the basis for inference, allowing us to analyse both the short-term adjustment process and the long-run relationship between the variables of interest.

Both economic theory and empirical evidence provide guidance regarding the signs of the coefficients associated with our selected variable of interest and controls. As widely discussed in this paper, an appreciation of REER is expected to negatively affect the current account by reducing export competitiveness and encouraging imports. ToT, measuring changes in real external purchasing power due to variations in export and import prices, is expected to positively influence the current account, as improvements in terms of trade increase national income and thus external saving. RGDP is also expected to have a negative effect, as stronger domestic activity typically increases import demand. TradeOp, defined as the sum of exports and imports of goods and services expressed as a percentage of GDP, is generally expected to improve the current account over the long run by expanding export opportunities, although it may also heighten import volumes. FB, measured as general government net lending/borrowing relative to GDP, is anticipated to positively affect the current account, in line with the 'twin deficits' hypothesis (Roubini and Sachs 1989; Chinn and Prasad 2003; Furceri and Zdzienicka 2018; Triggs 2019).

We begin our empirical analysis by estimating a parsimonious baseline model that includes only REER, ToT and RGDP. Subsequently, we extend this initial specification by sequentially incorporating additional control variables, assessing at each step the robustness of our main findings on the impact of REER on the current account. Before presenting and interpreting the estimated coefficients, we formally test for the existence of a long-run relationship among the variables using the bounds testing approach developed by Pesaran et al. (2001). We employ the finite-sample critical values of Kripfganz and Schneider (2020) for the bounds test, as they explicitly adjust for small-sample bias and the exact number of regressors, yielding more reliable inference in limited-sample settings. The outcome of this test, reported below, supports the validity of our error correction model specifications. Table 2 shows that the bounds test provides evidence in favour of the existence of a long-run relationship among the variables by rejecting the null at the conventional significance levels.

TABLE 2 | Bounds tests.

	Model (1)	Model (2)	Model (3)
Statistics and critical values			
F	6.897	6.589	10.575
t	−3.866	−4.034	−6.054
10% critical value			
F	3.961	3.754	3.651
t	−3.445	−3.658	−3.850
5% critical value			
F	4.675	4.394	4.263
t	−3.814	−4.038	−4.251
1% critical value			
F	6.291	5.843	5.671
t	−4.537	−4.789	−5.050

Table 3 reports three progressively augmented ECM specifications, where the current-account–to-GDP ratio is modelled as a function of REER and a set of additional controls. Column (1) presents the parsimonious baseline specification where we explain U.S. current account dynamics with REER variations controlling for the effect of ToT and RGDP. Columns (2) and (3) progressively add TradeOp and FB as further controls.

In all the specifications, the error-correction term is negative and highly significant ranging from −0.24 to −0.36, indicating a stable long-run relationship and an adjustment mechanism. Specifically, our estimates confirm the relevance of REER both in the long and in the short run dynamics of current account. The estimated coefficients are highly statistically significant in each specification and display the expected sign. In the long run, a loss in competitiveness due to a real appreciation of the U.S. dollar is associated with a deterioration of the current account: a 1% increase in REER is associated with a worsening of the current account in percent of GDP between −0.1 and −0.19; in the short run, the impact remains significant and negative, between −0.04% and −0.05%. All the control variables are overall statistically significant and with the expected sign, except for FB which seems not to contribute to CA dynamics. The lack of a clear FB effect on CA dynamics aligns with recent work reporting inconclusive evidence on the so called 'twin-deficits' hypothesis in GVAR analyses (Camarero et al. 2021) and mixed, bidirectional FB–CA relationships in country applications (e.g., for Germany and Portugal see Afonso and Coelho 2024).

To ensure the validity and robustness of our estimated ECM, we conduct several diagnostic and stability tests as post-estimation procedures, as shown in Table 4. Specifically, we test for residual autocorrelation, homoscedasticity, normality and multicollinearity. In order to address the concern of estimates bias due to structural breaks, we have performed the CUSUM test, concluding that the null hypothesis of absence of structural breaks cannot be rejected at the 1% level for all the specifications. The post-estimation results, displayed below, confirm that our baseline specification meets standard econometric assumptions.

To conclude, these findings are consistent with an interpretation of U.S. external imbalances that emphasizes competitive weaknesses: a 10% appreciation of the real effective exchange rate is associated with a long-run deterioration of the current account by about 1.0–1.9 percentage points of GDP, and a short-run impact of about 0.4–0.5 percentage points. For the sake of completeness, we tested the robustness of our exercise by explicitly accounting for the role of global value chains, offshoring, and U.S. multinationals. We used the Foreign value added share of gross exports (OECD database) as a proxy for GVC participation/offshoring, although this reduces the number of observations in our sample to 26–27. The results indicate that our original findings are robust to the inclusion of this additional variable.

To verify the robustness of this result, we also perform the reverse bounds test by treating the current account as the forcing

TABLE 3 | ECM estimates.

	Model (1)	Model (2)	Model (3)
ADJ			
L.CA	−0.242*** (0.063)	−0.255*** (0.063)	−0.359*** (0.059)
LR			
L.REER	−0.162** (0.047)	−0.194*** (0.053)	−0.131*** (0.031)
L.ToT	2.013* (0.992)	2.680** (0.956)	3.505*** (0.674)
L.RGDP	−0.037*** (0.007)	−0.027 (0.022)	−0.076*** (0.018)
L.TradeOp		−0.021 (0.040)	0.096* (0.036)
L.FB			0.000 (0.001)
SR			
D.REER	−0.039*** (0.009)	−0.049*** (0.010)	−0.047*** (0.009)
D.ToT	1.544** (0.480)	0.684* (0.272)	1.258*** (0.274)
D.RGDP	−0.138*** (0.035)	−0.102** (0.038)	−0.027*** (0.008)
D.TradeOp		−0.034* (0.014)	−0.033* (0.015)
LD.CA			0.216 (0.113)
D.FB			0.000 (0.000)
Constant	0.452*** (0.097)	0.453** (0.159)	0.925*** (0.184)
Observations	52	53	49
Adjusted R^2	0.443	0.460	0.598

Note: Standard errors in parenthesis. Corresponding ARDL models are ARDL(1,0,1,1), ARDL(1,0,1,0,1) and ARDL(2,0,0,0,1,0), respectively.
*$p < 0.1$.
**$p < 0.05$.
***$p < 0.001$.

TABLE 4 | Post estimation tests.

Test	Model(1)	Model (2)	Model (3)
Durbin–Watson	1.8308	1.3565	1.8045
Breusch–Pagan	0.4033	0.2313	0.8785
VIF (mean)	1.74	6.01	8.28
Skewness-Kurtosis (D'Agostino et al. 1990)	0.7598	0.5104	0.6274
Shapiro–Wilk	0.3812	0.6715	0.7602
CUSUM stat	0.3307	0.3292	0.2961
Critical value 1%	1.1430	1.1430	1.1430

variable for the REER. In this case no cointegrating relationship is detected, indicating that the current account does not drive the long-run dynamics of the REER. Having established the long-run properties of the system, we then estimate a VAR model and perform Granger causality tests. While this specification is informative only about short-run dynamics, it offers useful insights into the direction of causality between the variables of interest. The results indicate that the REER helps to predict movements in the current account both in a bivariate specification, where the first lag of the REER enters negatively and significantly (−0.05, $p < 0.05$) while the second lag is positive but not significant (0.03), and in a specification with control variables (restricted to the baseline specification including RGDP and ToT), where the first lag of the REER remains negative and significant (−0.05, $p < 0.10$) and the second lag is again positive but not significant (0.03). By contrast, when the current account is used to explain the REER, none of the lagged terms of the current account are statistically significant, thus providing no evidence of reverse causality in our exercise. Post-estimation diagnostics support the reliability of the estimates: both VAR specifications satisfy the stability condition—all eigenvalues < 1, max modulus ≈0.79—and show no evidence of residual autocorrelation—for example $\chi^2(4) = 5.45$, $p = 0.245$ at lag 1; $\chi^2(16) = 11.98$, $p = 0.745$ at lag 1 in the extended model—supporting the adequacy of the estimated models.

Interestingly, the short-run VAR coefficients for the REER are broadly consistent with those obtained from the ECM estimations, providing additional support for the robustness of our findings. The Granger causality tests provide further support to the evidence discussed above. In the bivariate specification, lagged values of the REER significantly help to predict the current account ($\chi^2 = 6.98$, $p = 0.031$), while no evidence of reverse causality is detected ($\chi^2 = 2.31$, $p = 0.316$). When additional controls are included in the VAR, the predictive power of the REER

on the current account remains borderline significant ($\chi^2 = 5.70$, $p = 0.058$), whereas the current account continues not to influence the REER ($\chi^2 = 1.32$, $p = 0.516$).

We conclude that the results in this section are sufficiently robust to support our main argument. Competitiveness, as measured by the REER, is a statistically significant and economically meaningful predictor of U.S. current-account dynamics—in both the short and the long run and even after controlling for other relevant factors. This statistical relationship appears unlikely to be driven by reverse causality, as suggested by the additional inference reported above.

Before assessing whether competitive weaknesses also affect the stock of external debt represented by the net international investment position, it is worth clarifying the enduring role of the current account in building up the net international position, as opposed to the growing emphasis on valuation changes. The next section provides descriptive evidence that questions the prevailing narrative that valuation gains outweigh cross-border transactions in shaping the NIIP.

3 | Current Account Still Matters: The U.S. NIIP Composition

The main purpose of this section is to reassert the relevance of the current account in shaping the net international investment position. Over the past decades, the literature has highlighted the role of valuation changes in determining external stock positions—partly in response to the rise of U.S. external debt. However, recent research may over-rely on this view.

Although the role of the current account has been downplayed over time, it obviously remains mechanically linked to the stock of external debt. According to the International Monetary Fund, international investment positions represent '[...] the balance sheet of the stock of external financial assets and liabilities. The financial items comprising the position include monetary gold, SDRs, claims on non-residents, and liabilities to non-residents' (IMF 2007). Conversely, the current account consists of the trade balance, income balance, and net unilateral transfers. The sum of these flows, plus valuation changes—arising from market value fluctuations of foreign assets and liabilities due to shifts in equity prices, bond prices, and exchange rates—determines variations in the NIIP.

Building on Hume (1752)'s original intuition, part of the academic literature emphasizes that current account adjustments tend to be self-correcting (among others see Corden 2007; Coeurdacier et al. 2010; Borio and Disyatat 2011) and that their effects are not fully captured by movements in the NIIP. According to this view, then, NIIP changes are largely due to valuation changes (Tille 2003; Gourinchas 2008; Lane and Milesi-Ferretti 2009; Obstfeld 2012a), which also have a relevant role for external adjustment (Obstfeld 2004; Gourinchas and Ray 2007, Gourinchas and Rey 2014; Ghironi et al. 2015).

The first comprehensive study documenting the linkage between balance of payments flows, the underlying stock positions, and the impact of valuation changes was conducted by Lane and Milesi-Ferretti (2001, 2007). Over the past decade, the rapid accumulation of external positions and gross asset and liability flows—particularly in wealthier countries—has underscored the increasing significance of asset price changes in explaining the variability of the NIIP. Indeed, such valuation changes can overshadow the effects of current account flows, providing evidence of a decoupling between current account and NIIP dynamics. Influential research by eminent economists such as Lane and Milesi-Ferretti highlights the substantial role of asset price and exchange rate dynamics in shaping NIIP statistics.

In a recent study, Milesi-Ferretti (2024) constructs a U.S. NIIP series adjusted for valuation changes. Starting from the official U.S. NIIP figure in 2010, he accumulates annual financial transaction flows (sourced from the BEA database) that reflect changes in external asset and liability stocks excluding valuation effects. The results are striking: absent valuation changes over 2011–2021, the U.S. NIIP would have improved from −71% of GDP to −35% by 2021. This implies that so-called 'financial transactions' account for less than half of the officially reported NIIP position by the IMF, while valuation changes attributable to asset prices and exchange rates have contributed more than half of the cumulative NIIP variation.

Nonetheless, while acknowledging the significance of valuation changes, it is important to emphasize that the computed cumulative NIIP is highly sensitive to the chosen starting point. Using 2010 as the base year means that the analysis begins from that specific moment, thus assessing the relative importance of financial transactions versus valuation effects without considering prior developments. This aspect is not considered by former Governor Visco in his debate with one of the authors of this paper (Brancaccio and Visco 2024). Broader insights might be gleaned by extending the temporal scope of the analysis. For instance, the BEA dataset begins in 2002, which can serve as an alternative base year. Figure 1 compares three NIIP series: the 'gross NIIP' from the IMF (blue line), and two 'net' NIIPs excluding valuation changes, using 2010 and 2002 (green and red lines, respectively) as respective base years. In this regard, examining a longer timeframe may enrich the discussion.

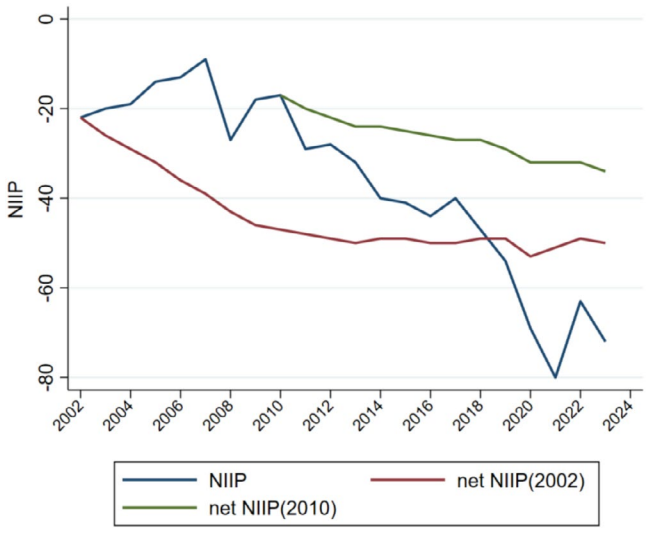


FIGURE 1 | Official IMF NIIP and 'net' NIIP (2010 and 2002 based). [Colour figure can be viewed at wileyonlinelibrary.com]

The 'net' NIIP series display similar trajectories but differ in intercepts depending on the base year. Several insights emerge from this comparison. Using 2002 as the base year results in a 'net' NIIP around −51% of GDP in 2021, notably less negative than the −35% figure estimated by Milesi-Ferretti (2024) using 2010 as the base. This suggests that valuation changes have operated differently over time. Specifically, the 'net' NIIP based on 2010 shows that valuation changes have negatively impacted the NIIP over the period, exacerbating the effect of financial transactions, as the 'gross' NIIP consistently lies below this 'net' NIIP. In contrast, the 'net' NIIP anchored in 2002 indicates that cumulative valuation changes actually improved the U.S. NIIP until 2018, offsetting the negative imbalance arising from financial transactions: here, the 'gross' NIIP remains above the 'net' NIIP based on 2002. From 2018 onwards, valuation changes again appear to negatively affect the 'gross' NIIP. This outcome is unsurprising and aligns with previous findings by Gourinchas and Rey (2005) and the IMF (2005), which show that between the 1990s and early 2000s, valuation changes had a stabilizing effect. In particular, they improved the U.S. NIIP by 7.2% of GDP in 2002–2003, partially offsetting a large proportion of financial deficit amounting to 10.4% of GDP. This highlights that, unlike the current period, valuation effects functioned as a buffer in the past.

This naturally raises the question of how significant these valuation effects have been over time compared to financial transactions, which represent the accumulation of current account balances. Table 5 reports cumulative amounts for each category starting in 2003, the earliest year available in the BEA dataset. Over the 2003–2023 period, financial transactions—largely equivalent to the current account—total approximately $11 trillion, nearly twice the $6 trillion attributed to valuation changes. This comparison highlights two key points: (1) cumulative financial flows from the current account substantially outweigh cumulative valuation changes, and (2) valuation effects are highly volatile, often offsetting each other over time.

TABLE 5 | Comparison of the amount of the cumulative flows.

Year	Cumulative CA	Cumulative VC	Prevalence
2002	0	0	Base
2003	−0.5	0.7	VC > CA
2004	−1.1	1.1	VC > CA
2005	−1.8	2.3	VC > CA
2006	−2.6	3.1	VC > CA
2007	−3.2	4.3	VC > CA
2008	−4.0	2.3	**CA > VC**
2009	−4.2	3.9	**CA > VC**
2010	−4.6	4.4	**CA > VC**
2011	−5.1	3.0	**CA > VC**
2012	−5.6	3.4	**CA > VC**
2013	−6.0	2.9	**CA > VC**
2014	−6.2	1.6	**CA > VC**
2015	−6.6	1.4	**CA > VC**
2016	−7.0	1.1	**CA > VC**
2017	−7.4	1.9	**CA > VC**
2018	−7.7	0.2	**CA > VC**
2019	−8.2	−1.1	**CA > VC**
2020	−8.8	−3.5	**CA > VC**
2021	−9.6	−6.8	**CA > VC**
2022	−10.4	−3.5	**CA > VC**
2023	−11.3	−6.1	**CA > VC**

Note: All the variables are expressed in trillion USD.

In our view, these measurement issues make it hard to draw firm conclusions about the NIIP level from cumulated flows alone: the question 'what is the NIIP in 2021?' cannot be answered definitively. It is, however, meaningful to discuss trends and whether valuation changes gained prominence over specific intervals. Even if we accept Milesi-Ferretti's 'net' NIIP estimate of about −35% of GDP for 2021, it would be inappropriate to infer that roughly 65% of the U.S. external imbalance reflects valuation effects and is therefore largely policy-irrelevant. Indeed, a set of studies portrays the United States not only as the global lender of last resort but also as the demander of last resort (Fischer 1999; Aizenman and Jinjarak 2009; Das et al. 2023): the persistence and scale of U.S. trade deficits suggest a structural absorption pattern shaped by relative prices and demand behaviour rather than by valuation swings. Over-emphasizing valuation gains risks downplaying the possibility of persistent over-indebtedness rooted in policy and other structural features of an economy like competitiveness, for instance. By contrast, Milesi-Ferretti's policy conclusions about the large U.S. debt position are built on a valuation-based adjustment—specifically, the expectation that foreign equity markets will outperform and that non-dollar currencies will appreciate against the U.S. dollar. Yet valuation effects are highly variable and hard to predict, making them an unreliable basis for external adjustment. As Roubini and Setser warn, '[...] such valuation gains are contingent and volatile; they cannot be relied upon to offset continued large current account deficits over time [...]'. Moreover, Gourinchas and Ray (2007) complement this critique by noting that it implicitly assumes the U.S. so called exorbitant privilege will persist indefinitely: '[...] A natural question arises as to why the rest of the world would finance the U.S. current account deficit and hold U.S. assets, knowing that those assets will underperform. [...] one should be cautious about any policy seeking to exploit the valuation channel since to operate it requires that foreigners be willing to accumulate further holdings of (depreciating) dollar-denominated assets [...]'. Policy prescriptions relying on valuation changes adjustments have been strongly criticized also by Obstfeld (2012a), Gourinchas (2008) and IMF (2005).

To conclude, it should be emphasized that when Milesi-Ferretti advocates a weaker dollar to secure compensation via valuation gains, he also recognizes that such depreciation would support

current-account adjustment. We wish to stress that while it is widely accepted that real exchange rate movements influence the current account, the existing literature on the United States has yet to comprehensively explore whether competitiveness issues, as proxied by the REER, play a significant role in shaping the dynamics of external indebtment. Once again, Milesi Ferretti's account tends to read a worsening NIIP as a sign of strength—via favourable valuation effects—whereas it could be viewed as evidence of U.S. loss of competitiveness. In the next section, we show that the competitiveness channel matters not only for the current account but also for the NIIP. We conclude that the deterioration of U.S. external balances reflects also competitiveness weaknesses, and that the current account therefore retains substantive relevance.

4 | External Imbalances and Competitiveness: A Panel Approach

Having established a link between REER appreciation—that is a loss of price competitiveness—and the deterioration of the current account, we now examine whether a corresponding relationship holds for stocks. The prevailing view is that the stock of external debt is driven primarily by valuation changes (see Visco in Brancaccio and Visco 2024; Milesi-Ferretti 2024). As noted in Section 2, although valuation changes obviously affect the stock of external liabilities and assets, it is not immediate that they are the dominant force. To test for a statistical link between U.S. price competitiveness vis-à-vis international competitors and the net international investment position—even in the presence of valuation effects—we revisit and extend Milesi-Ferretti's (2024) panel framework.

The analysis of international capital flows in assets and liabilities focused primarily on current account deficits and surpluses until the early 2000s, mainly due to the lack of reliable data on cross-border asset and liability stocks. Lane and Milesi-Ferretti (2001) pioneered the study of the long-term determinants of net external positions by constructing the comprehensive *External Wealth of Nations* database (Lane and Milesi-Ferretti 2001). As Milesi-Ferretti (2024) observes, although a large literature examined global imbalances in the run-up to the global financial crisis, work on the subsequent period remains comparatively thin—apart from the IMF's External Sector Reports (see also Gourinchas and Rey 2014; for the U.S., Milesi-Ferretti 2021; Atkeson et al. 2025).

In this section, we follow the general approach of the panel analysis presented in Milesi-Ferretti (2024), examining the long-run relationship between the Net International Investment Position (NIIP) in percent of GDP and standard explanatory variables: since the early contributions, his empirical framework has consistently incorporated variables such as output per capita (RGDPpc), net public financial position (NetGov), the size of institutional investors (InsurAss), and demographic indicators (population growth, PopGwt; old age dependency ratio, Oldage) as key fundamentals of external positions, in line with the economic literature and reaffirmed in his subsequent work (e.g., Lane and Milesi-Ferretti 2007, 2018). As proposed by Milesi-Ferretti, the specification also includes the nominal effective exchange rate (NEER) and a stock market index (StockP), explicitly aimed at capturing valuation effects. The original baseline specification in Milesi-Ferretti (2024) is the following, where i denotes the country and t the year:

$$\begin{aligned}\text{NIIP}_{it} = {} & \beta_0 + \beta_1\,\text{NEER}_{it} + \beta_2\,\text{StockP}_{it} + \beta_3\,\text{RGDPpc}_{it} \\ & + \beta_4\,\text{PopGwt}_{it} + \beta_5\,\text{Oldage}_{it} + \beta_6\,\text{NetGov}_{it} \\ & + \beta_7\,\text{InsurAss}_{\text{it}} + \mu_i + \tau_t + \varepsilon_{it}\end{aligned}$$

where the dependent variable NIIP_{it} is the Net International Investment Position expressed as a percent of GDP, NEER_{it} is the nominal effective exchange rate, StockP_{it} is a domestic stock price index, RGDPpc_{it} denotes real GDP per capita (a standard measure of the level of economic development), PopGwt_{it} is population growth, capturing demographic dynamics relevant for saving and accumulation patterns, Oldage_{it} is an ageing indicator (e.g., the share of the elderly population), reflecting life-cycle forces that can shape external positions, NetGov_{it} measures the net financial position of the general government (financial assets minus financial liabilities, in percent of GDP), capturing the public sector's balance-sheet stance, and InsurAss_{it} proxies the size of institutional investors, which can affect portfolio allocation and external asset demand. Country fixed effects μ_i control for time-invariant country-specific characteristics, while year fixed effects τ_t absorb common global shocks. Finally, ε_{it} is the idiosyncratic error term.

With respect to this framework we propose three main modifications: (1) we add an interaction term between the two variables capturing valuation effects—namely, the stock market index and the NEER; (2) we compare the results obtained using the NEER with those based on the real effective exchange rate (REER); and (3) we test the relationship across several subsamples, starting from 1985. As for the first modification, while Milesi-Ferretti (2024) emphasizes the role of valuation changes due to stock prices and the NEER, we point out that their combined effect on the NIIP may be nonlinear—potentially reinforcing or offsetting each other—thus motivating the introduction of an interaction term. The second modification is central to our analysis, as it relates the net external position to a variable that reflects trade competitiveness, while also incorporating elements of valuation effects (for nominal and real exchange rate induced valuation changes see De Gregorio and Peña 2024). This approach is less commonly adopted. Notably, the relationship between international payments and the real exchange rate has traditionally been referred to in the economic literature as the 'transfer' problem. However, especially in intertemporal neoclassical optimizing models, this traditional framework treats the real exchange rate as an endogenous variable rather than as an explanatory factor driving international imbalances (Lane and Milesi-Ferretti 2000, 2002, 2004; Chinn and Prasad 2003; Ricci et al. 2013; Habib et al. 2017). Still, we can find research that explicitly models external imbalances dynamics with respect to international competitiveness. Although the literature also presents some positive correlations (Égert 2004; Chinn and Prasad 2003; Blanchard et al. 2005; Ricci et al. 2013), ECB (2012) clearly states: 'Developments in current account balances [...] are closely related to movements in relative competitiveness, as captured by real effective exchange rates' (supported by Trichet 2011 and Draghi 2012; on this point, see also: Blanchard and Brancaccio 2019). Finally, we depart from

the panel regression by Milesi Ferretti trying to extend the time horizon of the analysis. Indeed, the use of balance-sheet data—as adopted by Milesi-Ferretti to capture the evolution of domestic wealth and the sectoral shifts in asset-liability positions associated with rising net external positions (see Chen et al. 2013; Allen 2019)—significantly restricts the analysis to start from 1995.

In Milesi-Ferretti's baseline framework, the panel is limited because long time series for the general government net financial position (NetGov) and institutional investors' assets (InsurAss) are not consistently available. We therefore first estimate also a restricted specification that excludes these two variables in order to extend the sample horizon by 5 years, which is also appropriate given that the model already includes country and year fixed effects and several covariates, implying a sizeable number of parameters to be estimated. As an additional robustness exercise, we then replicate the analysis on alternative subsamples to assess the stability of the results over time (see Table 6). Our revised specifications are therefore the following (Equation 1 in columns A and B; Equation 2 in columns from C to E):

$$\begin{aligned}\text{NIIP}_{it} = {} & \beta_0 + \beta_1 X_{it} + \beta_2 \text{StockP}_{it} + \beta_3 X_{it} * \text{StockP}_{it} \\ & + \beta_4 \text{RGDPpc}_{it} + \beta_5 \text{PopGwt}_{it} + \beta_6 \text{Oldage}_{it} \\ & + \beta_7 \text{NetGov}_{it} + \beta_8 \text{InsurAss}_{it} + \mu_i + \tau_t + \varepsilon_{it}\end{aligned} \tag{1}$$

$$\begin{aligned}\text{NIIP}_{it} = {} & \beta_0 + \beta_1 X_{it} + \beta_2 \text{StockP}_{it} + \beta_3 X_{it} * \text{StockP}_{it} \\ & + \beta_4 \text{RGDPpc}_{it} + \beta_5 \text{PopGwt}_{it} + \beta_6 \text{Oldage}_{it} \\ & + \mu_i + \tau_t + \varepsilon_{it}\end{aligned} \tag{2}$$

where X_{it} is alternatively NEER or REER and $X_{it} * \text{StockP}_{it}$ is the interaction term capturing non-linear effects. Results are shown in Table 6.

Since our primary focus is on comparing the predictive power of NEER versus REER, we limit our discussion of the other parameters. We begin by examining the results from the replication of Milesi-Ferretti's specification, augmented with the interaction term in Column A2 of Table 6. Consistent with Milesi-Ferretti's findings, Oldage, NetGov, and, to some extent, InsurAss emerge as statistically significant determinants of the NIIP. This holds even after controlling for the NEER, the stock prices and their interaction, which, in this specification, do not appear to be statistically significant. In Column A1, we repeat the same exercise, replacing the NEER with the REER. The latter turns out to be statistically significant at the 10% level and exhibits the expected sign: a loss in competitiveness is associated with a deterioration of the NIIP. Interestingly, when the sample is restricted to the period 2000–2023 in column B1, both the REER and the interaction term become statistically significant at 1% level. The signs are consistent with expectations: the positive coefficient on the interaction term suggests a mitigating effect, whereby the negative impact of either REER (4.19) or stock prices (4.87) on the NIIP is attenuated when the other variable is relatively high, indicating that the dominant force prevails. A similar pattern emerges in column B2, where the NEER is considered. Interestingly, although both the NEER and the interaction term are statistically significant and exhibit the expected signs, their coefficients are notably smaller in magnitude and less statistically significant compared to those in the REER specification. As for the other controls, they retain their statistical significance and expected signs, while the stock price index turns negative and is statistically significant at the 1% level in both specifications—suggesting, as largely discussed above, that stock market booms tend to worsen the external position. We now extend our analysis to earlier periods by excluding NetGov and InsurAss, which enables a broader temporal coverage. Restricting the sample to 1990–2023 shows that, while NEER in column C2 remains statistically insignificant, REER in column C1—and, to a lesser extent, the interaction term—are significant and display the expected signs (coefficients −1.60 and 0.43, respectively). REER's marginal effect at the mean (MAM) is −0.38, implying that a 10% REER appreciation is associated with about a 3.8 percentage-point decline in NIIP/GDP. In Column D1, the negative effect of REER on the NIIP is statistically significant at the 1% level (coefficient −2.26), and the interaction term is significant at 5%. The MAM for REER in this sample indicates that a loss in U.S. price-competitiveness is associated with a 0.52 percentage-point worsening of NIIP/GDP for a 1% REER appreciation, that is 5.2 p.p. for a 10% appreciation. Again, Column D2 shows no significant effect of NEER or the other controls, except for the old-age dependency ratio, which is marginally significant at the 10% level. Columns E1 and E2 are consistent with these findings: E1 confirms the relevance of REER in shaping the U.S. NIIP (coefficient −2.27) with an interaction term of 0.66, both significant at 5%. Again, the MAM for REER implies a negative impact of a price-competitiveness loss: a 10% increase in REER corresponds to about a 2.9 percentage-point deterioration in NIIP/GDP (≈−0.29 p.p. per 1%). Column E2 reports no statistically significant coefficients.

In all the specifications where NEER is included, it reveals to be non-statistically significant while in the regressions including REER, StockP is statistically significant around 10%. Finally, although the original analysis by Milesi-Ferretti does not directly account for cyclicality we replicate all the specification in Table 6 by adding as a covariate real GDP growth, both keeping and excluding real GDP per capita. This refinement does not alter significantly the magnitude and the statistical significance of the parameters displayed in Table 6.

To conclude, our results suggest that the REER plays an important role in shaping the NIIP, outperforming the NEER in both magnitude and statistical robustness. This strengthens the case for price competitiveness as an important contributor to a country's external position and to long-term external imbalances. It also indicates that current-account flows remain central to the accumulation of external debt, so NIIP dynamics cannot be explained only by valuation changes.

5 | Conclusions

Among economists and policymakers, the view still appears to be fairly widespread that the United States is not experiencing significant declines in competitiveness, nor do they therefore have a serious foreign debt problem: then, these cannot be adequate explanations for America's protectionist shift. This thesis was supported, more or less explicitly, by former Governor Visco

TABLE 6 | Panel regressions.

	A		B		C		D		E	
	1995–2023		2000–2023		1990–2023		1995–2023		2000–2023	
	1	2	1	2	1	2	1	2	1	2
Variables	**REER**	**NEER**	**REER**	**NEER**	**REER**	**NEER**	**REER**	**NEER**	**REER**	**NEER**
StockP	−3.338	−0.84	−4.867***	−1.457*	−1.741*	−0.018	−2.438**	−0.004	−2.830*	−0.072
	(0.127)	(0.310)	(0.009)	(0.059)	(0.062)	(0.967)	(0.039)	(0.993)	(0.053)	0.9
StockP × REER	0.759		1.091***		0.425*		0.582**		0.661**	
	(0.120)		(0.009)		(0.051)		(0.032)		(0.044)	
REER	−2.850*		−4.188***		−1.599***		−2.255***		−2.265**	
	(0.081)		(0.001)		(0.006)		(0.007)		(0.026)	
StockP × NEER		0.205		0.339**		0.052		0.048		0.058
		(0.274)		(0.044)		(0.610)		(0.628)		(0.641)
NEER		−0.564		−1.188*		0.35		0.366		0.321
		(0.231)		(0.081)		(0.276)		(0.219)		(0.599)
RGDPpc	−0.009	−0.009	−0.004	−0.005	0.003	0.003	0.000	0.001	0.006	0.001
	(0.554)	0.586	(0.779)	(0.739)	(0.783)	(0.823)	(0.987)	(0.938)	(0.486)	(0.891)
PopGwt	0.163	0.178	0.15	0.168	0.180*	0.17	0.210*	0.208*	0.212*	0.229
	(0.138)	(0.153)	(0.158)	(0.177)	(0.084)	(0.129)	(0.055)	(0.086)	(0.090)	(0.114)
Oldage	0.064***	0.053***	0.053***	0.043***	0.036**	0.024*	0.036*	0.025*	0.024	0.013
	(0.002)	(0.000)	(0.004)	(0.002)	(0.047)	(0.070)	(0.053)	(0.090)	(0.155)	(0.407)
NetGov	0.664***	0.696***	0.738***	0.766***						
	(0.000)	(0.000)	(0.000)	(0.000)						
InsurAss	0.482*	0.461*	0.486*	0.467*						
	(0.070)	(0.060)	(0.078)	(0.077)						
Constant	11.217	1.146	17.262***	3.941	5.510**	−3.268**	8.518**	−3.278**	8.574*	−2.86
	(0.122)	(0.620)	(0.003)	(0.223)	(0.029)	(0.049)	(0.021)	(0.037)	(0.061)	(0.317)
Observations	882	882	774	774	1093	1093	996	996	859	859
R^2	0.297	0.279	0.298	0.267	0.153	0.166	0.173	0.176	0.198	0.183

Note: We replicate and extend Milesi-Ferretti's panel regression exploiting the available sources, country data and variables transformations. StockP, REER, NEER, RGDPpc are in logarithmic terms. Time and group fixed effects included. Robust standard errors in parenthesis, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

in his debate with one of the authors of this paper, by some studies by Milesi-Ferretti, and is endorsed by the IMF and others. Yet, as widespread as this opinion is, it has an unpleasant side effect: it makes it difficult to provide a straightforward economic explanation for the U.S. shift towards protectionism and the crisis of the American-led free trade 'order'. In other words, the failure to explain the protectionist turn in light of competitiveness and related external accounts problem may be one reason why many today insist on considering the American turn towards tariffs as the decision of 'madmen in authority who hear voices in the air', as Keynes might have ironically observed.

In this paper, we have attempted to provide some critical observations regarding this still prevailing view. We have shown that the decoupling of U.S. current account flows from net international investment position is far from obvious, and that both stocks and flows are correlated with the trend of the real effective exchange rate. Our estimated elasticities suggest that: a 10% real appreciation of the exchange rate is associated with a long-run deterioration of the current account of about 1.0–1.9 percentage points of GDP, and a short-run impact of about 0.4–0.5 percentage points; while on the stock side a loss in U.S. price competitiveness expressed by a 10% increase in the real effective exchange rate is associated with a change in the U.S. NIIP/GDP between 2.9 and 5.2 percentage points. These results seem to suggest that a deterioration in U.S. competitiveness relative to the rest of the world can be considered among the possible causes of the deterioration in the U.S. external accounts.

If our thesis were to find further confirmation, it seems reasonable to suggest that it could pave the way for a narrative of this historical period somewhat different from the current prevailing one. The competitiveness problems of the American economy could become one of the reasons of the increase in U.S. foreign indebtedness. This nexus could also begin to be considered among the possible factors contributing to the so-called crisis of the American 'order', in relation both to the shift from free trade to protectionism and to the redefinition of the boundaries of U.S. military hegemony in the world (on this point, see also Ferguson 2025).

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available in WB at https://data.worldbank.org/. These data were derived from the following resources available in the public domain: -WB, https://data.worldbank.org/.

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