

From Bretton-Woods to the Petrodollar: the USD as the world's reserve currency

After the ruins of the Second World War left most of Europe indebted and diminished, the United States was uniquely positioned to dictate the terms of the new global economy that would emerge after the dust had settled (McKinney, Joseph, 2014). As a result, leveraging its military and institutional strength, the US put its currency at the center of the global financial and trade systems by implementing it as the world's reserve currency, backed by the gold standard. This plan was agreed to by the Allied forces and subsequently came into effect as the Bretton-Woods system. The IMF enforced the agreement, requiring countries to peg their currencies to the USD at a rate of \$35 per ounce of gold. This resulted in largely stable exchange rates during the prosperous post-war era, but came quickly to an end after the United States ditched the gold standard in 1971. Due to rampant inflation and the inability to guarantee gold reserves, the need arose for more control over monetary policy, which is impossible under a fixed exchange rate, beginning the era of the unbacked fiat dollar. This momentarily threw the global financial system into uncharted territory and uncertainty, but it was quickly remedied by an agreement between Saudi Arabia and the United States to trade oil exclusively in USD in exchange for military protection and sales to the kingdom. This agreement quickly cemented the USD as the single currency for the energy trade, providing a stable demand for dollars, allowing the now-fiat currency to retain its global reserve status. This new system came to be known colloquially as the 'Petrodollar', tying the foundational importance of the oil trade to the global economy, and the dollar's reserve status into an unbreakable bond. But how exactly does oil create dollar demand? It is not as simple as oil invoicing driving dollarization, with the emphasis falling instead on the 'petrodollar recycling' mechanism (Kopper, 2009). In this system, oil is purchased in USD, meaning that importers must hold USD reserves in order to stabilize energy prices. As a result of this dollarized trade, oil exporters end up with a massive surplus in USD, which they then 'recycle' into US assets such as treasury notes, representing over \$9 trillion of US public assets (McCown et al., 2006).

A changing financial landscape: Structural strengths of the dollar and their gradual erosion

While the Bretton-Woods agreement and Marshall Plan served as the ideal catalysts for the rise of the dollar, this does not entirely explain the structural advantages keeping the dollar in this position, despite consecutive crises and monetary shocks. The three strongest forces supporting the dollar's reserve currency role are the USD's role in commodity markets, its role in trade and finance, and the unmatched liquidity and access of US financial markets. With Oil being the most prominent commodity traded in dollars, and the vast majority of agricultural and mineral exports being denominated in dollars, attempts to use other currencies fail to displace the USD (Goldberg & Tille 2008). Additionally, the USD plays a key role in trade, even without any involvement of the United States itself, serving as a widely accepted standard to reduce exchange rate uncertainty (Gopinath 2015), with its role in bond markets and debt markets being largely similar. Lastly, the US debt and treasury markets are simply unrivaled in depth and liquidity. These factors combine to create a spiral in which, for each additional user of USD, it becomes more advantageous for all others to use it, especially in commodities trading such as oil. Despite this 'perfect storm' of monetary factors, the Dollar's dominance is still subject to competition. Since 1999, the share of USD held in foreign reserves has fallen by roughly 12 percentage points, from 71% to 59%,

representing a notable decline. This is largely the result of diversification by central bank managers away from traditional reserve currencies, with a quarter of the change going to the renminbi, and the rest to cryptocurrencies and other non-traditional currency reserves (Arslanalp et al., 2022). In an era of increasingly profit-seeking banking practices, many bankers may choose to forgo the traditional safest currency baskets in favor of slightly riskier alternatives that yield higher returns than the close-to-zero interest rates of the USD and EUR. While it seems so far that the energy transition has yet to deeply erode the dominance of the US dollar, the future may not be as certain.

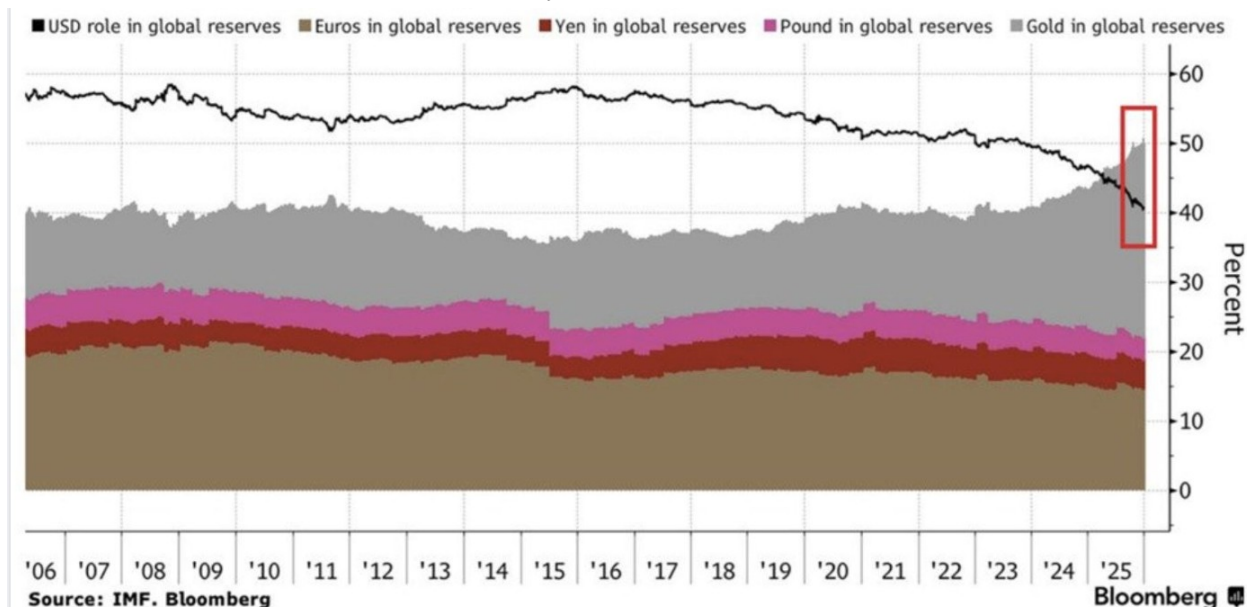


Figure 1: USD assets as a percentage of foreign exchange reserves from 2001 to 2025

Peak oil? Commodity markets and the energy transition

Despite the increasing politicization of climate change and fossil fuel reduction, the markets are quite clear: Oil is on the way out. While for a long time, the focus of alarm, academic and political interest was on the peak of oil production—due to its inherently finite nature—the debate has more recently shifted towards peak demand. The consensus of policy, economic, and oil industry experts has coalesced around the predicted peak between 2030 and 2035 (Delannoy et al., 2021), indicating that peak production will be due to demand constraint rather than supply. This has serious implications for the petrodollar system, as it was long held that as long as new oil was discovered and extracted, the demand for dollars would follow (Song et al., 2022). Without constant demand volumes for the USD from petroleum-importing countries, one of the strongest pillars of the USD's supremacy as the world's reserve currency might be endangered. On the other hand, while around 89% of annual oil trading volumes are in USD, this represents only around 4-5% of the total foreign exchange volume of the US Dollar (Koester et al., 2023), indicating that these fears may be overblown. While this is something that concerns US policy experts, it is a powerful motivator for many countries seeking to reduce their reliance on the US-led financial system, or ditch it outright, China being the most obvious example (Huang et al., 2026). Commodity market trading volumes have indicated that a significant share of volumes previously dedicated to petroleum are now shifting to so-called 'transition commodities' such as copper, nickel, and rare earth

minerals (Akinci Tok, Şerife, 2025). The dominance of the petrodollar system was based on the fact that oil is the energy source on which society is built, but while oil's status is being challenged, the importance of energy to societal functioning remains. The shifting commodity volumes are a clear indicator that energy will remain a driving force in global trade, with traders identifying the value of minerals critical to the energy transition (transition metals) as being similar to that of crude oil.

Decentralization and De-dollarization: A Green Death Sentence?

What makes oil a commodity so special is its universal demand, fungibility, and the relative ease of its pricing on global markets. The commodity that everyone needs and will pay the same for makes a perfect candidate for the backbone of a global reserve currency, a property that renewable energy does not have. Electricity prices vary wildly from place to place and can theoretically be generated anywhere, not subject to the same laws of scarcity and centralized extraction and distribution like oil. Unlike oil, electricity cannot easily be stored and traded internationally like oil can, making it an unattractive commodity for decentralized global markets. At face value, this seems like a death sentence for the internationally integrated energy economy, which for many decades has forced countries to pursue international peace and order, allowing for a predictable and accessible global energy market. This exact principle has been the justification for the lion's share of recent US foreign interventions (in Iraq, and more recently Venezuela) and policy. If every country can decouple itself from imported oil and hence the US financial system, this would have upheaving effects on the international order. The elephant in the room must first be addressed: transition metals, such as copper, nickel, lithium, and rare-earth group metals, that are irreplaceable components in many renewable energy-generating and storing systems. While the energy transition may reduce the single unifying commodity market that maintained dollar dominance, as is the case with oil, whoever controls the supply chains critical to energy still has immense political capital. While many of these metals exist as, if not more abundantly than oil, in a similarly vast distribution, processing, extraction, and refining have become largely concentrated in the country that seeks the end of dollar dominance the most: China

Petroyuan? The Shanghai Energy Exchange and China's Mineral Superpower Status

China has made it no secret over the last decade that it seeks to loosen the United States' grip on the global economy through its flagship Belt and Road initiative, as well as various other measures to internationalize the renminbi. While past initiatives such as direct currency swaps and the petroyuan for Gulf states have sought to chip away at the USD dominance in oil markets, China's near-monopoly on critical minerals for the energy transition may prove to be a powerful source of geopolitical leverage (Taylor, 2025). In a world where local electricity prices cannot form a globalized market, the minerals needed to generate said electricity may come to serve as the new 'oil', or rather, the new standard energy commodity. The Shanghai Futures Exchange already serves as a dominant marketplace for critical transition metals, serving as a proving ground for a renminbi-priced energy commodities exchange, where over 90% of global rare-earth exchanges are priced in Yuan, with even imports (around 77% from Malaysia and Laos) being priced in Yuan as well (Rzad, 2026). Given the lack of refining and extraction capacity development in the EU and the USA, the importance of the SFE could very likely grow

significantly in the coming years, resulting in widespread use of the RMB by importers of these critical minerals. The extent to which this occurs will depend heavily on how long China's dominance in these markets lasts, as well as the persistence of China's strict capital controls, which have long discouraged free use of the RMB by investors and traders, due to lack of convertibility and access (Attilio et al., 2025).

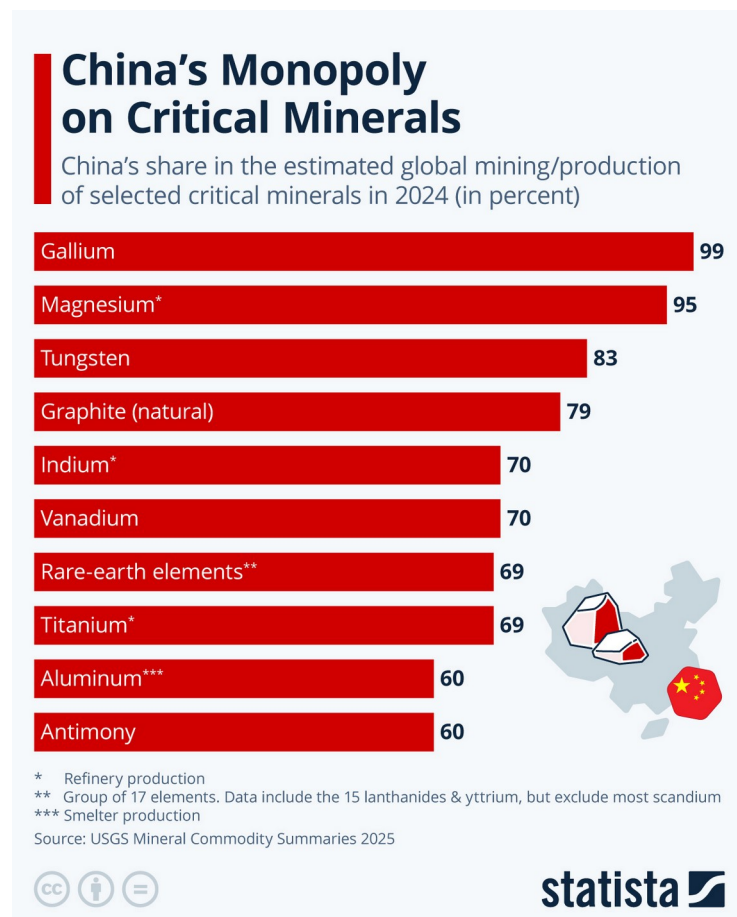


Figure 2: Share of critical transition mineral supply amongst major producers

Implications and polarity:

While there is evidence pointing to the erosion of USD dominance in the energy trade, it must be recalled that this is merely one of the pillars of dominance that perpetuates the USD as the world's reserve currency. Many of the main factors that have perpetuated USD demand, such as unrivaled depth and liquidity of debt and assets in the USD, are not going anywhere and will not be challenged unless China significantly liberalizes its financial controls or the EU implements a fully integrated debt and capital market. At the moment, a factor that is driving governments away from holding large USD reserves is sanctions: the weaponization of the dollar by recent administrations to punish countries such as Iran and Russia has made many governments, including those close to the United States, wary of relying exclusively on the USD as a reserve currency. The fear of SWIFT controls, or freezing of assets, may prove just as big a threat, if not bigger than the de-dollarization of the energy trade (Hefeker, Carsten, 2025). While the dollar still maintains all of its advantages in terms of financial fundamentals, the

politicization of the dollar and the decentralization of global trade, particularly in energy, seem to point towards an increasingly multipolar financial system. Assuming the US doesn't default on its onerous debt in the coming years, financial dollarization will likely remain, as there are presently no viable alternatives, but alternative reserve currencies may come to comprise a larger share of holdings, with bilateral currency swaps likely becoming more common. In addition, China is in a strong position to leverage its mineral dominance to further the internationalization of the RMB, specifically in the energy trade.

So what now?

Many of these factors are clearly working against the interest of the United States, and while there are some indications that this is affecting US foreign policy specifically in the form of recent hostilities towards countries attempting to trade energy in non-dollar currencies (Venezuela, Iran, Russia, India, etc), a clear doctrine has yet to emerge. Increasing attacks on the energy transition by the Trump administration will likely further erode any advantage the US may have had in leading global markets away from oil. Still, it will be seen if its adversaries truly capitalize on this to dethrone the dollar. A major development has been the transition of the US to a net exporter of oil, becoming the 3rd largest global exporter, representing around 10% of the global market (*Crude Oil: Exports | Economic Indicators | CEIC*, n.d.). This represents a significant boost to the prevalence of US currency in the energy trade, as the US is no longer entirely reliant on deals with foreign producers such as Saudi Arabia to facilitate oil pricing, as much if it can now be done through US companies. In addition, other actors like the EU are very actively seeking to reduce their reliance on imported critical minerals from China and Russia, and even the US, in the face of trade hostility, which, although long-winded, may reduce the leverage China has over Europe in this respect. In consideration of all the abovementioned factors, a dramatic collapse of dollar dominance does not seem likely, but current trends indicate a gradual transition to a more multipolar system of reserve currencies and trade denominations. But then again, only time will tell.

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