

# The euro challenges the dollar in international finance: a bumpy road ahead



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# Road map

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- Financial globalization
- Functions of international currency and relations among them
- Key role of *financial markets*: interplay between vehicle currency and asset currency functions (for both private sector and central banks)
- Reserve holding and anchor currency role
- Invoicing/quotation: trade and assets
- Investment currency
- Vehicle currency
- Costs and benefits
- Unwinding of global imbalances and shift from \$

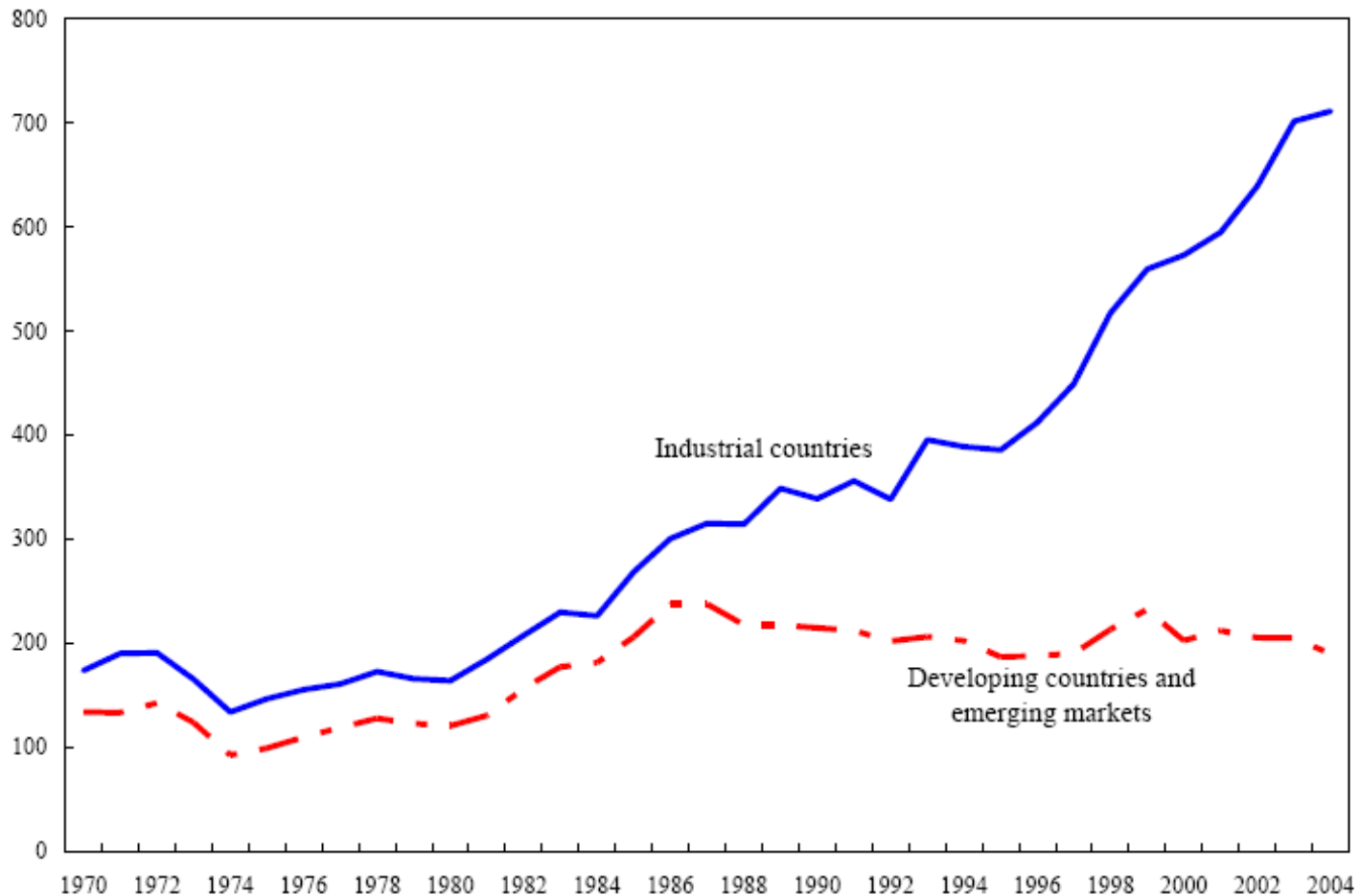


# Financial globalisation

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- Cross-border financial flows up much faster than trade
- Asset trade (including with emerging markets) dominated by major international currencies
- Resulting customer-dealer transactions in FX markets → large volumes of intra-dealer transactions
- FX markets have expanded dramatically, also international use of derivatives etc.
- Hence ***international role of a currency today much more related to financial than trade flows*** (relative to 1990)

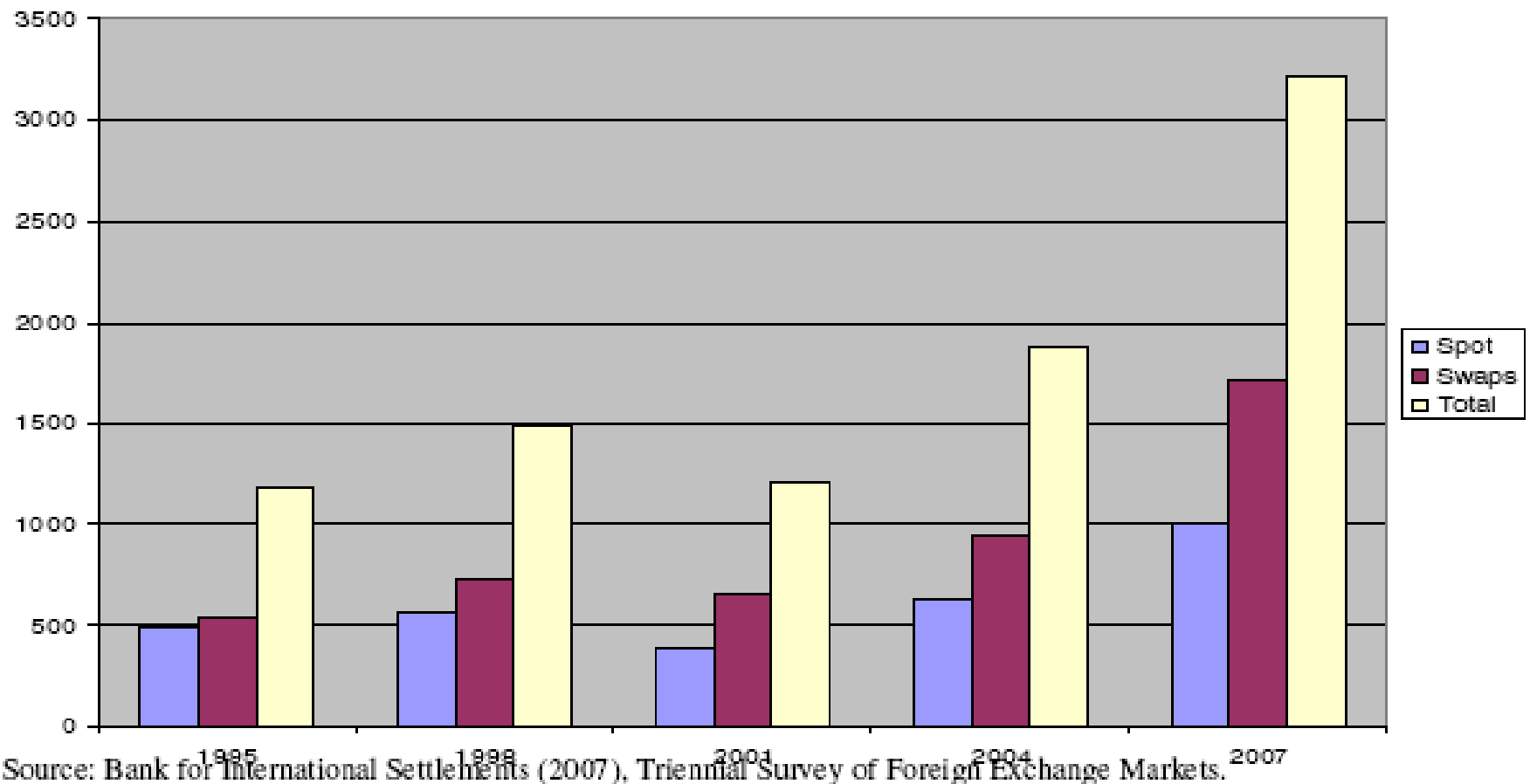
## Rapidly growing ratio of foreign assets and liabilities to trade from 1992



Note: Sum of external assets and liabilities in percent of sum of exports and imports.

# FX markets resumed expansion after EMU effects absorbed

Figure 6: Foreign Exchange Market Turnover





# Functions of an international currency

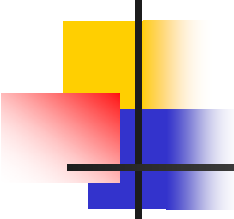
Function of Money	Government	Private Agents
Store of Value	International Reserves	Investment Currency (incl. currency substitution)
Medium of Exchange	Vehicle Currency for Foreign Exchange Intervention	Invoicing (vehicle) currency for trade in goods and assets.
Unit of Account	Anchor for currency peg	Quotation currency for trade in goods and assets.



## Functions are linked

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- Choice of reserve currency depends on currency stability (store of value, unit of account), size of economy, role in world trade
- Financial market determinants of vehicle currency
- Vehicle currency influences composition of reserves (maybe less so now, with more inflation targeting and floating)
- Size, depth and liquidity of financial markets also key in choice of investment currency



# Government use: unprecedented reserve accumulation

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- Stock including SWFs approaching \$7 trn
- Increase driven by demand from emerging markets, commodity producers, Japan...
- ...but also by supply of dollars (US CA deficit)
  - global imbalances...



# Dollar dominance

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- Confirmed by Bretton Woods
- Maintained/explained by 'network externalities'
- But diversification motive works the other way – especially if there are alternative assets tradeable in large, liquid and deep financial markets
- And increasing use of euro as pegging or 'anchor' currency may change incentives for reserve holders



# Composition of international reserves

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- 65% of reported reserves in \$-denominated assets (70% in 1999-2004), 25% in € (up from 17% in 1999)
- Still, considerable inertia
- But models with network externalities have multiple equilibria (Portes and Rey 1998)
- Might shift if expectations and transactions costs change, with high elasticities of substitution between assets denominated in alternative major currencies
- And why should central banks of countries accumulating reserves buy only \$ ?



# Central bank diversification

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- Across assets – including activities of SWFs
- Across currencies
- Factors relevant to the currencies: inflation, ER volatility
- Inertia (persistence)
- Regionalism – distance matters



# Anchor currency role

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- Switch from \$ to basket pegs (Russia, Libya, China, maybe GCC)
- De facto anchoring – some switch towards €, comparing 2005-6 with 1994-8



## Private use: invoicing

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- Data scant, but € gradually rising...
- ...esp. when one party is an EU country
- Attractiveness of currency for invoicing affected by ER risk, volatility of inflation, capital market development, absence of capital controls – so € now attractive alternative – but regionalism
- \$ used for reference-priced and exchange-traded goods – won't change unless transaction costs change a lot
- Still, natural gas market worth watching, and OPEC becoming unhappy about \$ pricing



# Investment currency

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- Transaction costs now lower for €-denominated than for \$-denominated corporate bonds, close for government bonds
- Bid-ask spreads in FX markets now similar (very close to zero)
- €-area financial development now comparable to US and UK, superior to Japan



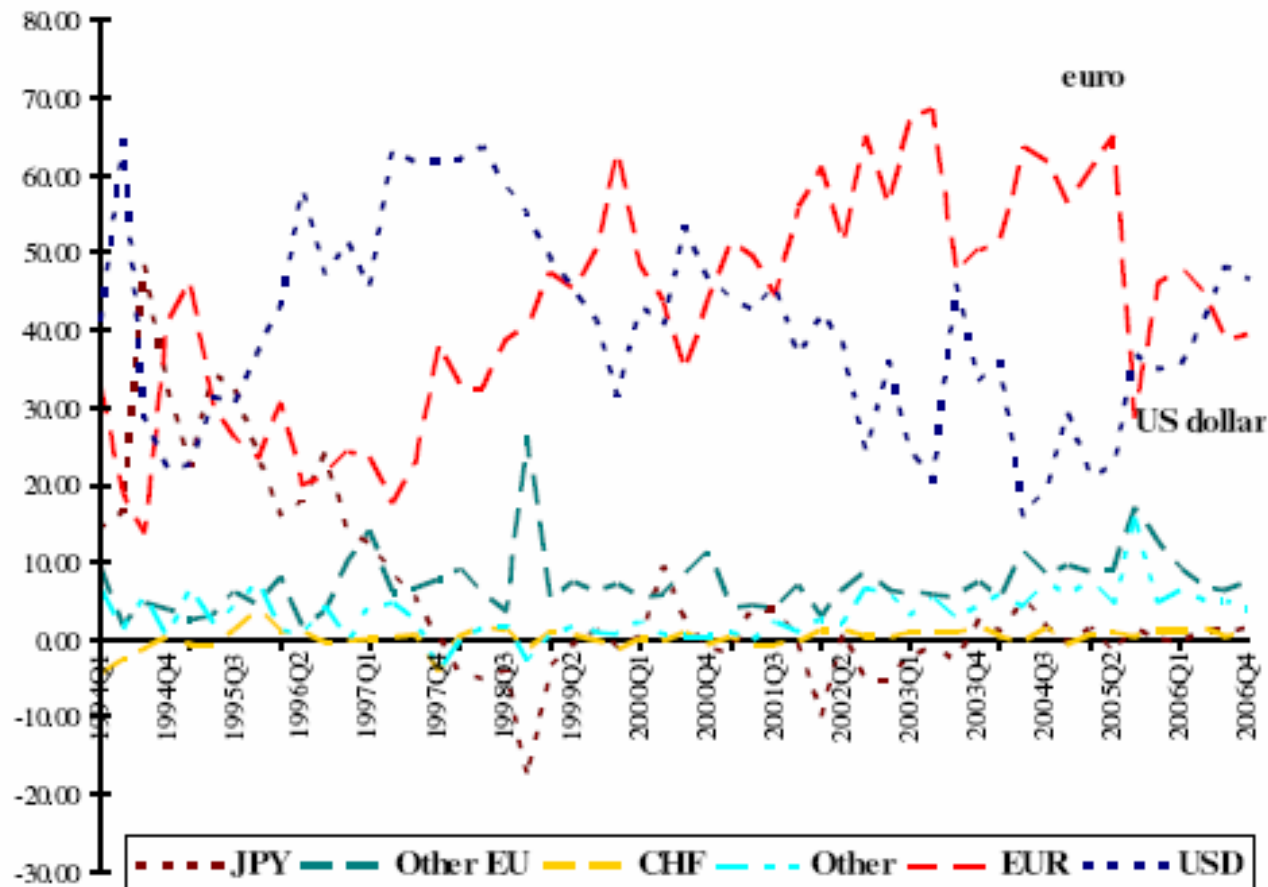
## Issuing (quotation) currency

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- € issuance exceeds \$ in international markets since 2001, and € ahead of \$ in outstanding stocks since
- € has brought significant increase in liquidity of international debt markets (Bobba et al. 2007)
- Is \$ still 'safe haven'?

# € issuance exceeds \$ from 2001...

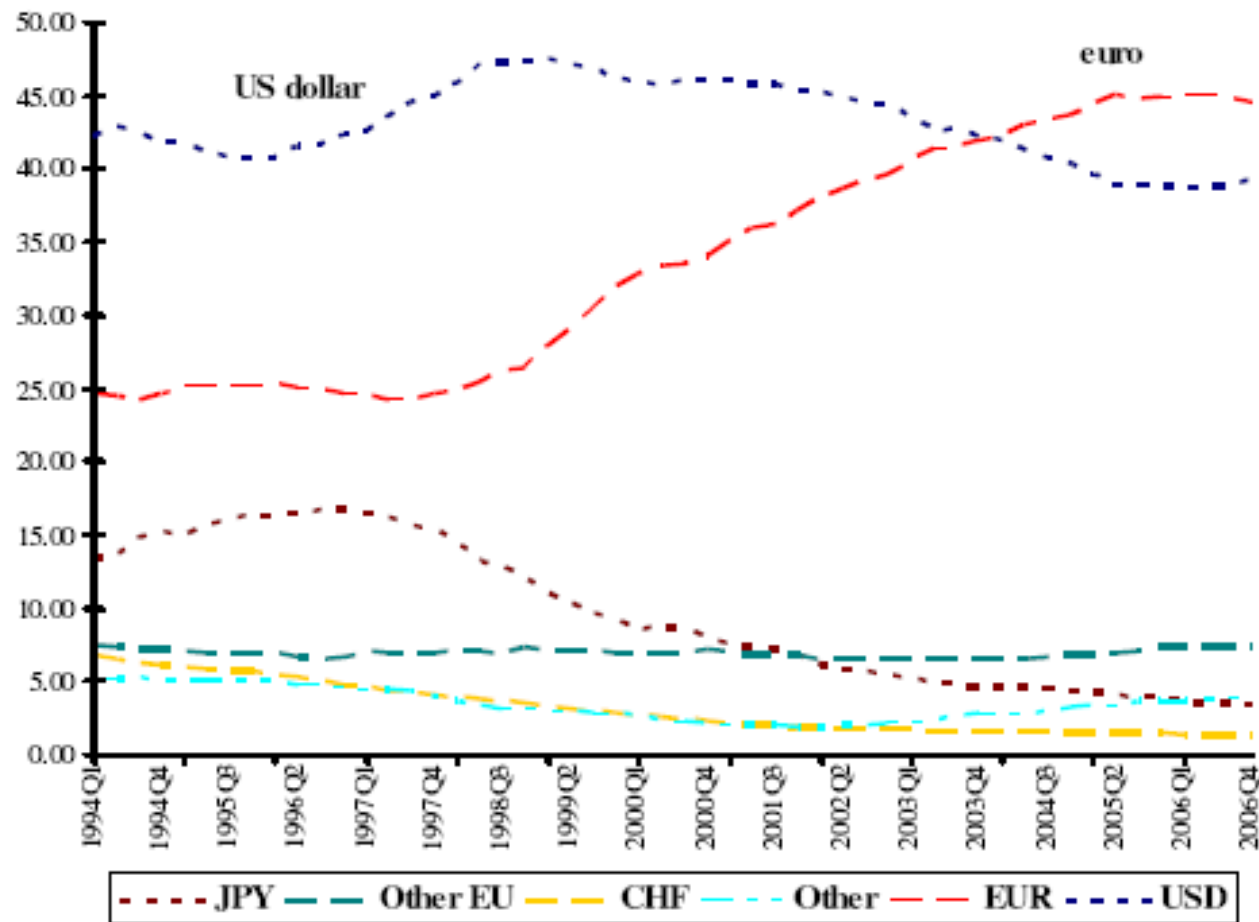
**Figure 10: Net Issues of International Debt Securities**  
(Bonds, Notes and Money Market Instruments)  
*including home currency issuance ("broad" measure)*



Source: BIS

# ...and outstanding stocks since 2004

**Figure 11: Amounts Outstanding International Debt Securities  
(Bonds, Notes and Money Market Instruments)  
including home currency issuances ("broad" measure)**



Source: BIS



## Other private-sector use

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- Optimal *hedging* strategies (Campbell et al. 2007): bondholders should be in \$ (which appreciates when global bond prices fall), equity holders in € as well as \$ (both negatively correlated with global equity returns)
- And volume of cross-border equity transactions growing faster than for bonds
- Physical currency use: \$ still dominant, usage outside US 3 times greater than € outside EMU
- But €-denominated deposits from non-€-area residents) growing rapidly



## Vehicle currency in FX markets

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- BIS (2007) shows \$ still dominant (appears in 86.3% of transactions, down from 88.7% in 2004)
- € at 37.0% (37.2% in 2004)
- \$ also dominates OTC FX derivatives
- But € exceeds \$ in market for OTC interest rate derivatives (cf. government bond markets, where cash market dominates futures for US Treasuries, the reverse for € government bonds)



## Still, is € area capable of managing an international currency?

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- Financial stability and regulation – fragmentation of regulatory authority
- Institutional factors (taxation, legal systems, ...) may impede further progress of financial integration and modernisation
- Unclear LLR authority
- But ECB has handled market liquidity problems at least as well as Fed



# ECB policy cool towards € internationalisation

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- The first potential cost: internationalisation of the currency may complicate monetary policy
- Hard to interpret changes in monetary aggregates and interest-rate spreads
- How to treat and predict currency holdings abroad
- But is this quantitatively important?



## But there are benefits – e.g., seigniorage

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- Portes-Rey 1998: 0.1% of GDP
- Kannan 2007: 0.5% of GDP
- We now project seigniorage in 2020 and find it amounts to 0.44% of GDP
- And by that time, euro has surpassed dollar, whose seigniorage is only 0.09 % of GDP



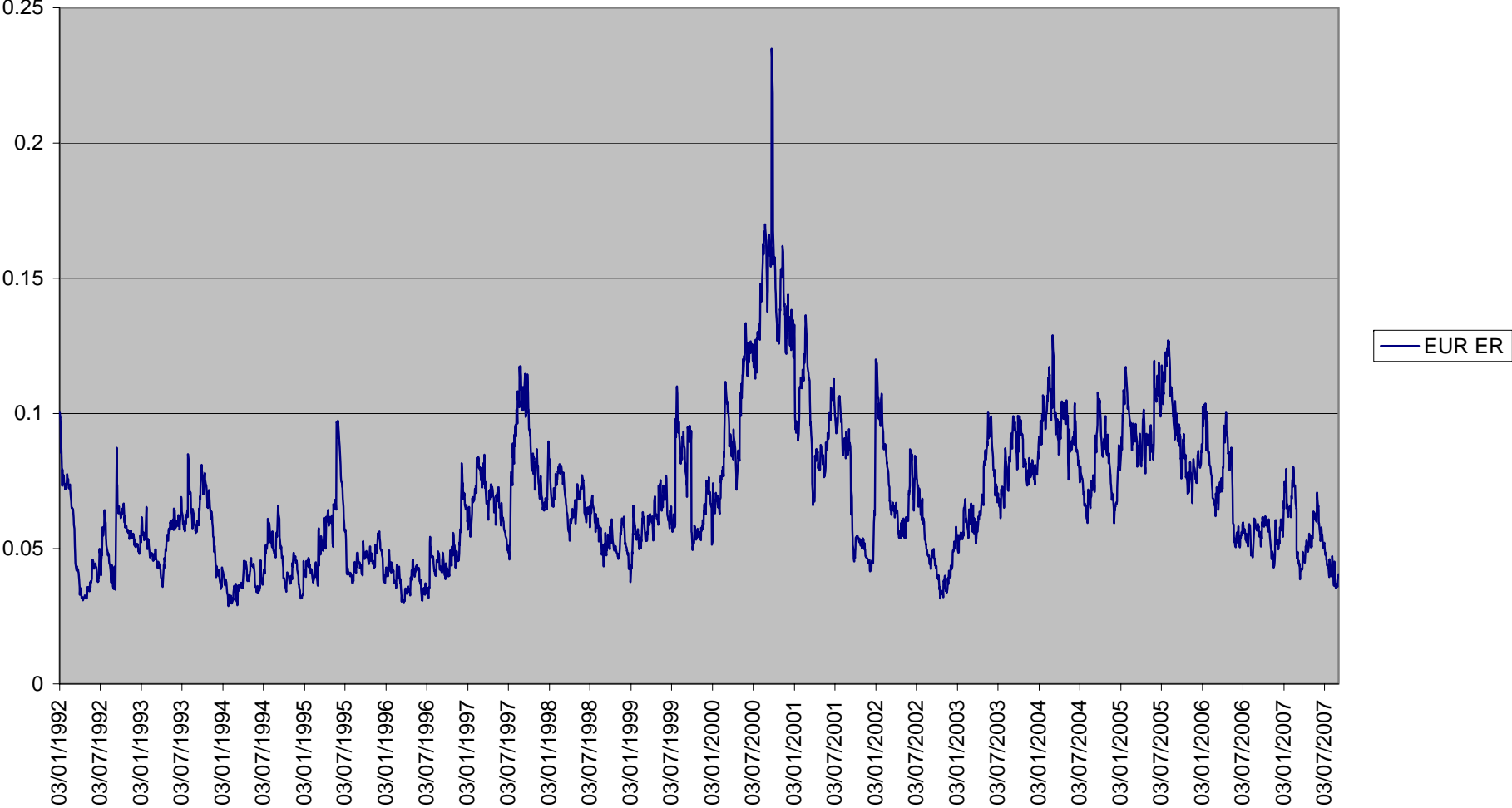
## And costs: exchange-rate volatility

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- We find that the *volatility of nominal effective ER of euro has been clearly higher than that of the 'synthetic' rate was during 1992-99*
- Effect of exposure to and prominence in the international financial environment

# Euro NEER volatility higher post-1999

Global Vola Corrected EUR Daily Nominal Effective ER





## Another benefit: Liquidity premium

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- Portes-Rey: 25-50 bp → 0.1% of GDP (based on bond volume outstanding in 1997)
- Krishnamurthy-Vissing-Jorgensen estimate 'convenience yield' on US Treasuries and effect of foreign official demand – between 19 and 55 bp
- Warnock-Warnock estimate 90 bp or more
- Applying that to €-area would give 0.5% of GDP



## Bottom line

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- Internationalisation of the currency may complicate monetary policy – no evidence
- Seigniorage could come to almost 0.5% of GDP, liquidity premium a further 0.5% of GDP
- Exchange-rate volatility has risen



# Global imbalances

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- US current account deficits of 5-6% of GDP for several years, with growing net debt
- Why?
  - high net savings in Asia, with underdeveloped financial markets there, low net savings in US
  - deep financial markets in US
  - belief that US would grow faster than Europe
  - uncertainty about euro
- Hence big flows from Asia (and recently oil and commodity exporters) to US
- Dollar assets rise as share of international portfolios



## Global imbalances threaten dollar's dominance

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- Unprecedented that main international currency is issued by country in substantial, continuing CA deficit, with NIIP  $\ll 0$
- UK pre-1914 borrowed short and lent long, as US now, but it ran a large CA surplus and was big net creditor



# Unwinding

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- Some countries abandon dollar pegs (they are importing inflation)
- Quality of US assets more doubtful, US growth slowing, US inflation up
- So lower private flows into US assets
- Central banks and SWFs diversify (they have already taken large capital losses from dollar depreciation)
- High US inflation or serious dollar depreciation would threaten dollar's global status – conversely, switch out of dollars would accelerate depreciation
- So a possible self-reinforcing process – to the detriment of the US and benefit of euro area
- But implies euro appreciation against dollar...