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# Cross-border finance, trade imbalances and competitiveness in the euro area

by Hubert Gabrisch (Vienna)<sup>1</sup>

## **Abstract**

*The nearly exclusive explanation for current account imbalances in the euro area blames real economy differences between countries, prominently the competitiveness of the participating states. This essay questions the common opinion that wage policy is crucial for rebalancing the European economies. This essay attempts to unfurl the real economy processes from the perspective of money and finance. This essay identifies an interregional asset-price-interest mechanism at work in the monetary union: A general change in the state of confidence provokes asset prices and the effective long-run interest rate to change and to affect aggregate demand and trade flows. A change in competitive positions of countries follows as the second-round effect. The policy implications prefer a downscaling of the financial sector against government interventions into wage formation.*

JELclassifications: E12, E43, F15, F36, G15

Key words: Financial flows, liquidity-preference, trade imbalances, competitiveness, euro area

## **1. Introduction**

This paper questions the dominant explanation of trade imbalances in the euro area (EA) since its official start in 1999 and the resulting split in debtor and creditor countries by changes in their competitiveness position. My essay seeks to show why and how excessive cross-border finance is the main cause of the deteriorated competitiveness position of certain EA member states and not vice versa. The idea of a reversed causality resembles Böhm-Bawerk's famous dictum (1914: 508): "*Die Zahlungsbilanz befiehlt, die Handelsbilanz gehorcht, nicht umgekehrt*".<sup>2</sup> This statement contains two assumptions, which are characteristic for the modern balance-of-payments analysis, which I will not adopt. The first assumption is the basis of the canonical consideration of net flows in many real economy models. A net resource transfer in the trade or current account balance is assumed to be identical with its

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<sup>2</sup> 'The balance of payment rules, the trade balance obeys, and not vice versa.'

external financing. In the succession of Böhm-Bawerk, this approach assumes the equivalence of savings (current account) and investment financing (capital account). This approach produced such confusion as the Lucas-Paradox, the Feldstein-Horioka-Puzzle or contemporary statements that a surplus in the current account finances the investment of a second country or the rest of the world. This approach is rooted in the mix-up of physical with financial resources, hence money or claims on money (credit). Borio and Disyatat (2015) show *in extenso*, and Hobza and Zeugner (2014) provide the data for the EA, that in a multilateral world, bilateral current account deficits usually do not correspond with gross or net financial flows. Both saving and financing are different issues. A balance-of-payments analysis with net flows is not able to reveal the adjustment mechanisms either in the real or in the financial sector of an economy. Therefore, my analysis is based on gross capital flows.

The second assumption not adopted here is the underlying theory of the rate of interest, which guides the explanation of causes and effects of capital flows in the EA by certain contemporary followers of Böhm-Bawerk (for example, Sinn 2010). The interest rate ensures the intertemporal commodity equilibrium between today's saving (for investment) and future consumption. Because of Keynes (1936), we know that the rate of interest is a monetary phenomenon. His liquidity-preference theory substantiates a reversed causality that runs from the state of confidence through asset prices, the rate of interest and the investment in physical capital. My study identifies the *interregional asset-price-interest* mechanism as being crucial for the interaction between independent expansions of finance and trade imbalances in a monetary union and discusses it against the background of disparate regions. This, as far I know, new approach identifies cross-border gross financial flows as a trigger of trade flows between regions or countries. Thus, my approach is also distinct from pure commodity-market models such as the Dutch-Disease literature, which models the harmful impacts of a transfer of income to the receiving country. However, financial flows do not arise from savings but from the creation of credit by their financial sector.

This study attempts to unfurl the real economy processes in the EA from the perspective of money and the virtual explosion of financial flows. There is, to the best of my knowledge, no similar approach, although the literature on imbalances and competitiveness in the EA is impressively vast. The paper attempts to address two questions: (1) Are capital flows detached from the real economy in the modern financial capitalism including the EA and why? This question is the subject of the next section, which shows why expansions and contractions on the modern global financial markets follow changes in the state of confidence

and not events in the real economy. (2) How can we describe the linkage of financial flows and the real economy? The answer is the model in section three that explains why and how detached cross-border financial flows for their part effectuate real economy adjustments. Section four briefly discusses other interpretations, and section five presents certain recent empirical studies. Section six concludes that not only may wage policies be crucial for re-balancing the monetary union but also a control and reduction of its financial sectors.

## **2. The separate life of modern finance**

### *2.1 Liquidity preference and casino capitalism*

The distinct sign of a capitalist economy is the use of money for the transfer of purchasing power from the present to the future. This function includes the fundamental uncertainty with respect to the expected return of each investment in the future. The preference of agents to hold unprofitable money reflects their desire to always remain solvent, and an increase in this preference signals a possibly approaching threat of insolvency. The alternative to unprofitable money is the investment in interest-bearing securities, which presumes a certain trust of the investor in the ability of the debtor to repay. The existence of a financial sector is rooted exclusively in this function of money to reduce uncertainty and increase the flexibility for the holder. The revolutionary achievement of Keynes for modern economics is not the discovery of the principle of effective demand (others have done this earlier) but to have identified the preference for liquidity as a key driver for effective demand and its changes. His theory is a liquidity theory of effective demand.

The liquidity-preference theory is the lens through which one may detect that financial market developments may not necessarily be derived from events in production, distribution and allocation or, in sum, the real economy.<sup>3</sup> Instead, events and sentiments on financial markets are passed onto the real economy through the long-term nominal interest rate. However, financial markets do not fix the interest rate but the market value or price of a security. A rise in the general preference for liquidity, hence money, induces the market value of all assets to contract.<sup>4</sup> Rational agents will invest less into physical capacities, buy or issue fewer shares and other financial assets or restrict, as a private household, certain segments of its

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<sup>3</sup> See also chapter 12 of the *General Theory* (Keynes 1936) on the state of long-term expectation.

<sup>4</sup> Explicitly, this applies to a situation of unchanged central bank money.

consumption. The financial sector will be less inclined to acquire debt titles so that their market value will contract. In these circumstances, any investor who considers the purchase of a financial asset expects a higher interest rate as a risk premium. The higher the state of confidence is, the higher is the market value of a representative asset and the lower is its effective return. In case of an infinite life-span of the paper (e.g., shares), we have

$$i = \frac{z}{P_A(\mu)} \quad (1)$$

where  $z$  is the primarily fixed nominal interest or coupon rate,  $P_A$  is the market value of the paper determined by the state of confidence  $\mu$ , and  $i$  the effective interest rate or the yield.<sup>5</sup> This inverse relation is crucial for understanding the interaction between demand for investment in the real economy and the financial markets. A higher effective interest rate (= higher liquidity preference) is tantamount to a lower readiness of the corporate sector to take debts to finance net investment and the financial sector to buy debt titles and to re-finance through the issuance of the entity's own debt titles. The demand for investment in the capital stock weakens, and the price non-financial corporations would pay for capital goods. The process passes with reversed signs, when uncertainty and the liquidity preference decrease. Incidentally, with a time lag,  $z$  responds to a change in  $i$  because events in the secondary markets of previously issued papers will be transferred to the primary market of new emissions.

The lens of the liquidity theory opens the view to an extreme version of autonomous capital market developments that Keynes named casino after the experience with stock market crashes in 1929 (Keynes, 1936, Book 12, VI). He did not investigate this market in greater detail as Hyman Minsky (1982) or Susan Strange (1986) later did. In particular, Susan Strange marks 'casino capitalism' as the decoupling of financial markets from the real economy. A related term is financialization. Similar to casino capitalism, financialization implies that investment into physical capacities is not the dominant matter of financing but the purchase of financial resources.

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<sup>5</sup> The substance of the issue does not change in case of an asset with a finite life-span like a bond. Equation (1) is a general statement and is different to financial business concepts of a capital-asset-pricing model.

## 2.2 Institutional attributes and dynamics of globally integrated financial markets

Until the beginning of the 1970s, the financial system consisted of credit banks controlled by the central bank, completed by conservatively acting saving banks and pension funds, and the access to the foreign financial market was regulated and restricted for both domestic and foreign agents. The system followed a period of global liberalization and deregulation, an extreme rise in the volatility of financial and global resource markets, and an explosion of cross-border capital flows, financial innovations and new institutions. Bresser-Pereira (2010) defines ‘financialization’ as the new set of institutional arrangements after the liberalization and deregulation of financial markets. The modern financial system is full of shadow and quasi-banks, legally independent special vehicles, and private equity funds, which all abscond from traditional banking supervision. A new type of financial institution has emerged, the *Highly Leveraged Institution (HLI)*, whose business model targets high profits by leveraging a low input of equity, however implicitly, by taking simultaneously higher risks. The most well-known HLIs are *Hedge Funds*, often with their residence in off-shore centers and tax havens and which do not need a license from the national supervisory authority.

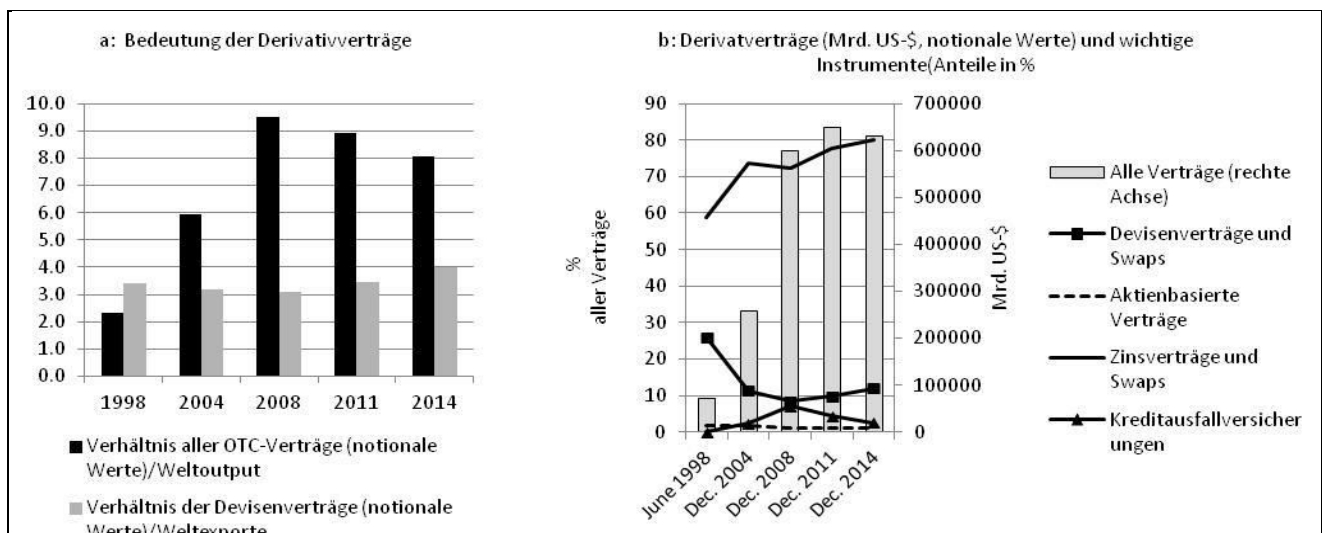
For corporations, the modern financial markets create opportunities for book profits when their balance-sheet positions are valued at the higher mark-to-market-value compared to the book-value. Notional gains in these companies’ balance-sheets protect against hostile takeovers that had become more likely in a globalized environment and improve the conditions of external refunding. This new company strategy entails an orientation towards short-term profits, which are easier to obtain by financial assets than by net investment into productive capacities. Thus, investment in (foreign) financial assets and real estate may replace capital investment (at home). For example, the global Siemens Corporation reported a fixed asset of total Euro 44 bn for 2014, of which 42 bn were allotted to financial assets, mainly shares of affiliated companies.<sup>6</sup> The trading in financial assets is a mere wealth transformation among other active positions in the corporation’s balance-sheet. The dominance of financial assets changes the structure of the profit and loss account because the share of income from dividends, interest and coupon rates will increase to the detriment of

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<sup>6</sup> Annual statement of accounts of the Siemens AG per 30th September 2014, online: [www.siemens.com/investor/pool/de/investor.../Siemens\\_SAG2014\\_D.pdf](http://www.siemens.com/investor/pool/de/investor.../Siemens_SAG2014_D.pdf)

income from productive activities. In the Siemens Corporation case, the share of income from financial assets represented approximately 80 per cent of the annual surplus in 2014. Detzer et al. (2013) provide the results of a systematic survey on the non-financial corporate sector in Germany. German companies increasingly invest in financial assets instead of their own fixed capital; however, it is not the income motive for foreign engagement but the notional capital gain. Thus, whether earned dividends and interest income abroad are higher than at home remains of minor relevance.

Figure 1: Size and instruments of global derivative contracts (notional values)

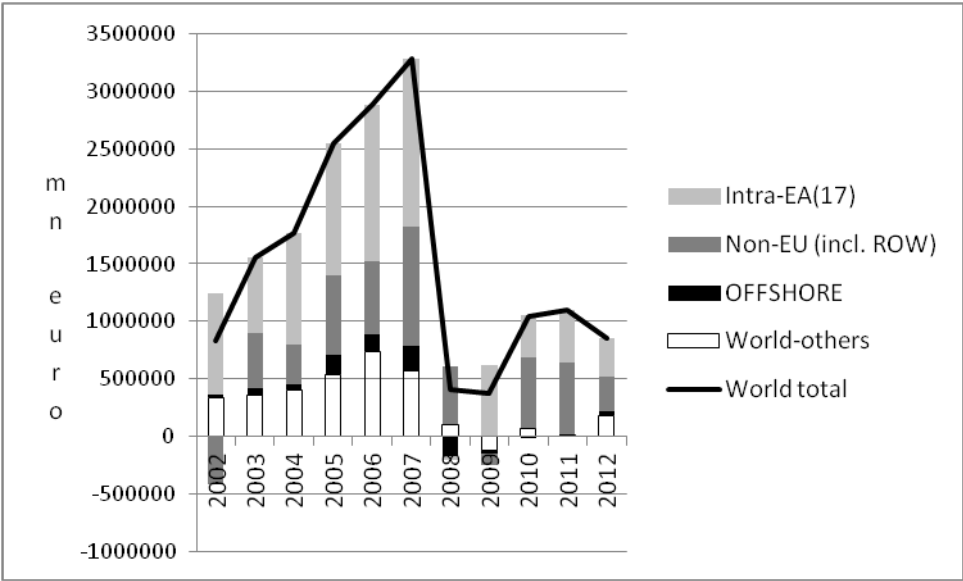


Sources: Author's calculation and presentation based on data of the Bank for International Settlements, online, Table 19, World Bank online and UNCTAD online.

Open and deregulated financial markets show an elevated volatility of market values and yields of the traded securities intensified by a high volatility of prices of important resources such as crude oil and other raw materials. Financial institutions seek to cope with the problem of rising uncertainty by innovating derivatives and collateralized securities. The global trading of financial assets is no longer dominated by traditional securities such as money market papers, bonds or shares but by over-the-counter (OTC) derivatives, completed by asset-backed securities and futures. Stefan Schulmeister (2008) shows in detail how modern, electronic-based speculation in derivative markets pushed the financial markets to be detached from the real economy. Derivatives are based upon other securities and serve the financial market actors by absorbing the risk of market value and interest rate fluctuations. A traded bond entails a multiple turnover of respective derivatives, primarily interest contracts and

currently also credit default swaps. Derivatives and futures currently represent the largest part of the trade with securities : The notional value of all derivative contracts has increased to eightfold of world output since 1998, compared to twofold in 1998 (Figure 1). The notional value of exchange rate contracts exceeded world exports by threefold in 1998 and achieved a fourfold increase in 2014. The reason is simple: A high volatility of the value of derivatives promises short-term high returns at low equity and thus, feeds the emission of new bonds (Schulmeister 2009). Thus, trading with derivatives also influences the market value of the underlying securities through the provision of liquidity to the secondary markets, and changes in the market value of traded financial assets are highly correlated.<sup>7</sup> The liquidity lunacy, which is misleadingly named *savings glut*, desires an ever-growing input of financial resources for one per cent of real growth. There is no one who could plausibly justify why less financing per this one per cent real growth would not suffice in a more stable global financial system.

Figure 2: Regional distribution of gross financial flows of the EA(17), mn Euro



Legend: World-others: Financial flows into central banks and non-reporting countries.

Source: Author’s compilation and presentation based on the data set of Hobza and Zeugner (2015): <http://www.zeugner.eu/studies/finflows/>

<sup>7</sup> There is a rich empirical literature on this subject. See also the study by Frank and Hesse (2009) who apply GARCH modeling and find that transmission of shocks (financial crisis) rather strengthen the correlation. In addition, the nominal interest rate of an investment loan usually follows the effective interest rate on bond markets.



Financial flows in the EA have ridden the global wave in the run-up to the financial crisis 2008. However, the introduction of the Euro provided them a specific push, the so-called euro bias: Kalemli-Ozcan et al. (2010) and Hobza und Zeugner (2015) show that gross financial flows among EA countries became stronger than global flows and flows with the remainder of the European Union. Lane (2013) finds financial linkages of the economically stronger EA core to have grown more with the weaker periphery, and Choi and Park (2014) find evidence that debt papers dominated over equity papers and bank loans. Chen et al. (2013) argue that financial investors have also, and increasingly, viewed euro securities as close substitutes. Additionally, Hobza und Zeugner (2015) emphasize that bilateral financial flows do not necessarily follow bilateral trade flows. The existence of offshore-centers that serve the needs of financial investors emphasizes the limitations in the analysis of net balances in financial and trade relations between two countries. Figure 2 illustrates the regional distribution of annual gross financial flows of the EA (17) before, during and after the global financial crisis.

### **3. The transmission of autonomous financial developments into the real economy**

The section starts considering the asset-price-interest mechanism in a closed economy, which allows an easy introduction into the context once the economy is split into two countries or regions with a common currency. The starting point is equation (1) above, which establishes the causality running from the state of confidence on the financial markets through the asset prices to the long-run interest rate. With respect to financial assets it may be the simplest way imagining them as long-run private or sovereign bonds with a high degree of substitutability. Their effective interest rate or yield is set at the secondary market and is correlated with the correspondent derivatives (interest rate contracts or credit default swaps), on the one hand, and with interest rates on long-run bank loans on the other.

#### *3.1 The asset-price-interest mechanism in the closed economy*

The financial as well as the non-financial corporate sectors are connected by the cash flows expected by the non-financial sector. A positive cash flow secures the desired solvency at all times and simultaneously determines the demand of the non-financial sector for and the supply of the financial sector of interest-bearing debt titles. We may express the expected cash

flow as the present value  $V$  of cumulated monetary flows over the lifetime of an existing capital stock:

$$P_K \bar{K} = V = \frac{E(\pi)}{i} \quad (2)$$

where  $P_K$  is the present demand price, which the corporate sector is ready to pay for one unit of the given capital stock  $\bar{K}$ .  $E(\pi)$  are the expected positive incomes from the utilization of  $\bar{K}$  with  $E$  as the expectation operator, and  $i$  is the (of course, long-term) effective interest rate on the capital market. Equation (2) disregards different capital goods as well as their remaining lifetime. In this respect,  $E(\pi)/i$  stands for an over the entire term and different capital goods differentiated present value.

We can re-arrange equation (2) as a function of the demand price for capital goods being dependent on the expected returns on capital in relation to the product of the given capital stock and the effective capital market interest rate:

$$P_K = \frac{E(\pi)}{\bar{K}i} \quad (3)$$

With constant expectations  $E$  and a given interest rate, massive sales out of the given capital stock will lead to a fall in the demand price  $P_K$  -  $P_K$  is falling in  $\bar{K}$ . In addition, the demand price is falling in  $i$  because a decrease in the present interest rate raises the present value of the capital stock. Finally,  $P_K$  is will increase when  $E(\pi)$  increases.

Equation (1) allows the expression of all statements regarding the effective interest rate as statements regarding the market value of debt titles. Neglecting the primarily fixed nominal interest rate  $z$  on a debt, (3) changes into

$$P_K = \frac{E(\pi)}{\bar{K}} P_A(\mu) \quad (4)$$

The state of confidence  $\mu$  affects the demand for and the supply of already issued as well as new securities and their market value and interest rate. When  $\mu$  increases and markets are open, the international trading of securities and derivatives will intensify as described in chapter 2.

Taking the total differential,

$$dP_K = \frac{1}{K} P_A(\mu) dE(\pi) + \frac{E(\pi)}{K} dP_A(\mu) - \frac{E(\pi)P_A(\mu)}{K^2} d\bar{K} \quad (5)$$

we obtain three partial differentials with the properties described above. The second partial differential is of specific interest: it is the decisive transmission channel of how a change in the state of confidence  $\mu$  causes a change in the demand for debt titles and a change in the demand price for all capital goods, including existing and new ones. It is the demand for investment into physical capital that increases when a higher price for capita  $P_K$  raises the present value of the existing capital stock. At this point of the analysis, we find the reason why the increasing demand for debt-financed new capital goods boosts effective demand and deteriorates the current account balance with a constant propensity to import.

The next step adds the supply side and explains cost responses – so to speak, second-round effects: An increasing demand for capital goods is satisfied primarily by the production of new ones and not by sales out of the given capital stock. Typical for Keynesian models is that the supply price for new capital goods is not independent from the demand price  $P_K$ , when the capacity for their production is limited in the short-run. When the demand price increases, the supply price should follow when it reflects the increasing cost of producing an additional unit of the capital goods (= investment  $I$ ). This linkage between demand and supply prices is the theory of dual prices, which is applied in Keynes (1936) as well as in Minsky (1982). The theory is akin to Tobin's q-value as the ratio between the market value and the replacement cost of a company (Tobin 1969). The connection between the demand and the supply price or cost-plus price  $C_I$  can be written as

$$C_I = C_I(X) = C_I(P_K) \quad (6)$$

with  $X$  as a vector of various cost and profit categories. Potential investors will invest in productive capacity as long as the demand price for them exceeds the cost of production of the next additional unit because this price-cost difference assures a notional wealth income gain for the owners of old as well as new capital stocks. The higher present value of the existent capital stock is a promise of a higher income against the expenditure for them in case the researchers would sell them. Banks and quasi-banks such as HLIs realize that and are ready to lend or buy corporate bonds and to refinance both through own borrowing. The process of investing comes to an end when the demand price equals the cost of the last unit in

the production of capital goods. The higher effective demand for capital goods entails higher unit costs in their production.

### 3.2 The interregional asset-price-interest mechanism

The case of the monetary union with two-countries S and D is illustrated in Figure 3 under the assumption of constant income expectations  $E(\pi)$  of the non-financial corporate sector. The horizontal axis measures the capital stock  $K$  and investment  $I$  and the vertical axis the demand price per unit capital  $P_K$  and the marginal cost per unit new capital  $C_K$ .  $\bar{K}$  is the capital stock in any equilibrium between both. Because the demand price is the inverse function of the effective interest rate on financial markets, a higher price is tantamount to a lower interest rate according to equation (1). There are two demand curves for capital goods  $I(i)^S$  resp.  $I(i)^D$ . Both have a negative slope because  $P_K$  will contract with sales out of the existing capital stock. In other words, the willingness of companies to offer capital goods from the stock declines when the demand price increases. The distinct location of both curves is fixed by the interest rates  $i^S$  and  $i^D$ . Their curves' rightward shift is the response to a decline in the interest rate, a higher demand price and a higher market value of traded debt titles at a given capital stock. We further find a cost curve  $\overline{C_I C_I}$ , which, for simplicity reasons, applies to both countries (equal technologies assumed) and which reflects the increasing cost of the production of one additional unit of capital goods.<sup>8</sup> This assumption is justified by an increasingly inelastic supply of capital and labor. When costs are dominated by labor, unit labor costs and total unit cost  $C_I$  will also increase.<sup>9</sup> Furthermore, we find several possible equilibrium points  $T$ ,  $Z$ ,  $H1$  and  $H2$  between the marginal output costs and the demand price for capital goods.  $T$  is the equilibrium price in country S prior to the monetary union, and  $Z$  in country D;  $H1$  and  $H2$  are hypothetical equilibriums that serve for illustration.

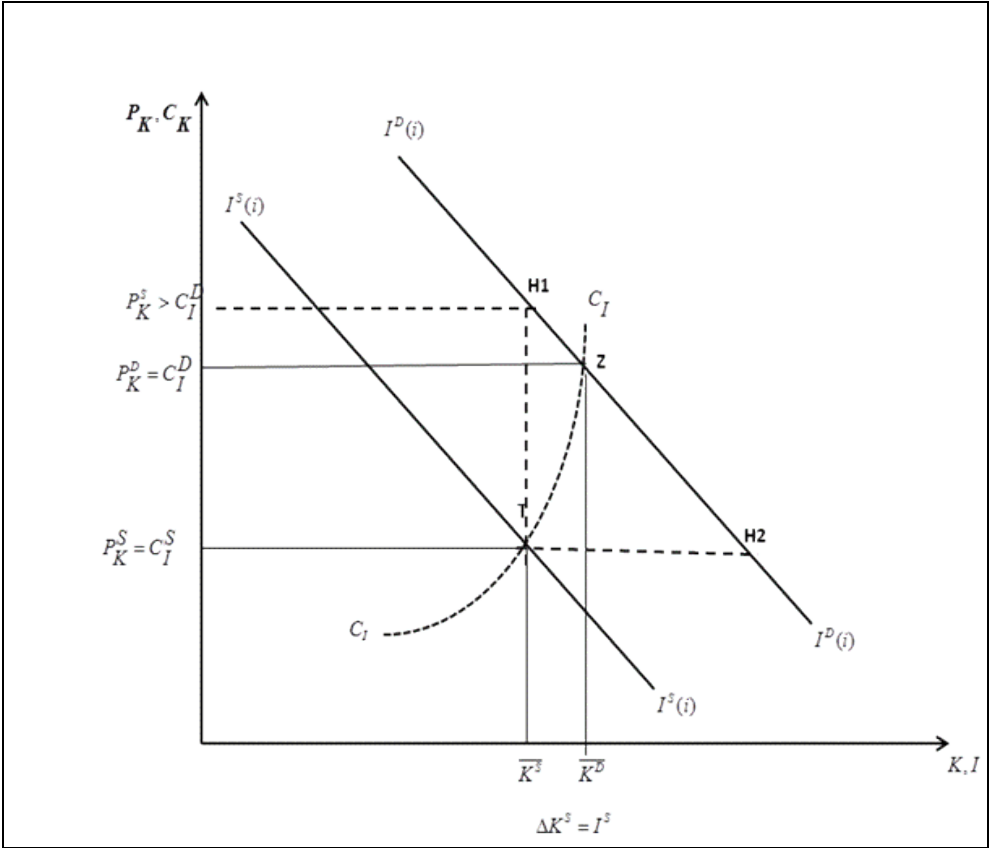
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<sup>8</sup> Keynes seems to have assumed falling returns on capital as the source of increasing production cost without being precise what he had in mind. This weakness opened the door for a broad debate about the meaning of the term capital in theoretical and empirical analysis with the famous capital controversies as climax. Since then, Keynesians do not treat the law of falling capital returns as a physical concept, also not in my study. There are different concepts in the debate, which consider an inverse relationship between the amount of capital and its price (see McKenna and Zannoni, 1990).

<sup>9</sup> Precisely, when increasing marginal costs outpace fixed cost digression.

Prior to the monetary union, a lower demand price in S compared to D is tantamount to a higher interest rate. Financial investors in both countries understand the difference as a sign of a higher risk and abstain from an excessive engagement in debt papers of country S despite a higher nominal interest rate  $z$  and a lower price for capital. In addition, the marginal cost of capital goods production is lower in S than in D.

Figure 3: Demand and supply prices for capital goods



With the monetary union in force, the abolition of risks in country S sounds like a horn signal of promising capital gains not only for S resident investors but also for D investors. They will wish to invest more in long-term debt papers and may mobilize domestic financial resources from profits, issuance of bonds, and borrowing from banks. An example may be a German global player who releases a bond to finance the takeover of the majority of shares of a Spanish corporation. An increase in asset prices (stock market prices) in S would follow, as would a decrease in the effective interest rate  $i$  and, consecutively, of the effective interest rate for these shares. After accession to the monetary union, the expected capital gains in S can more than compensate for a possible decline in the returns from the effective interest rate.

These prospects trigger a flow of financial resources from D to S. The contraction in the interest rate  $i^S$  is depicted in a rightward shift of the demand curve for capital goods in country S towards the demand curve in country D.

For the owners of the existing capital stock in S, the capital gain results from the difference between the new  $P_K$  in the hypothetical equilibrium H1 and the old  $P_K$  in the initial equilibrium  $T$ . Thus, the conditions for finance have improved for all who desire to invest in the capital stock in country S and who are ready to borrow from banks, issue bonds or shares. The willingness to finance includes the banks, HLIs or other financial investors not only in country S but also in country D because financial and capital markets are now completely integrated and risk premiums are equalized. The flow of funds from D to S (= capital export) not only triggers a rising demand for capital goods in country S but also finances it ex ante. The rightward shift of the demand curve for capital goods (= interest rate convergence) alone has caused the effective demand of country S to increase and to deteriorate the trade balance with country D.

A mirror-inverted process with a decrease in asset prices, a rise in the interest rate and less investment in country D depends on how the financial sector in D refinances the flow of funds to S. If balance sheets are extended or reserves are reduced, asset prices will not shrink in D. Then, investment and income of the entire monetary union may increase but with higher interregional trade imbalances. Conversely, if financial investments in S are financed exclusively through the liquidation of domestic active positions (sale of bonds, for example), a contraction of investment in D may be expected; however, this would strengthen the trade surplus with S because lower effective demand will also curb imports from there. Figure 2 does not exclude such a course of events in the EA surplus countries.

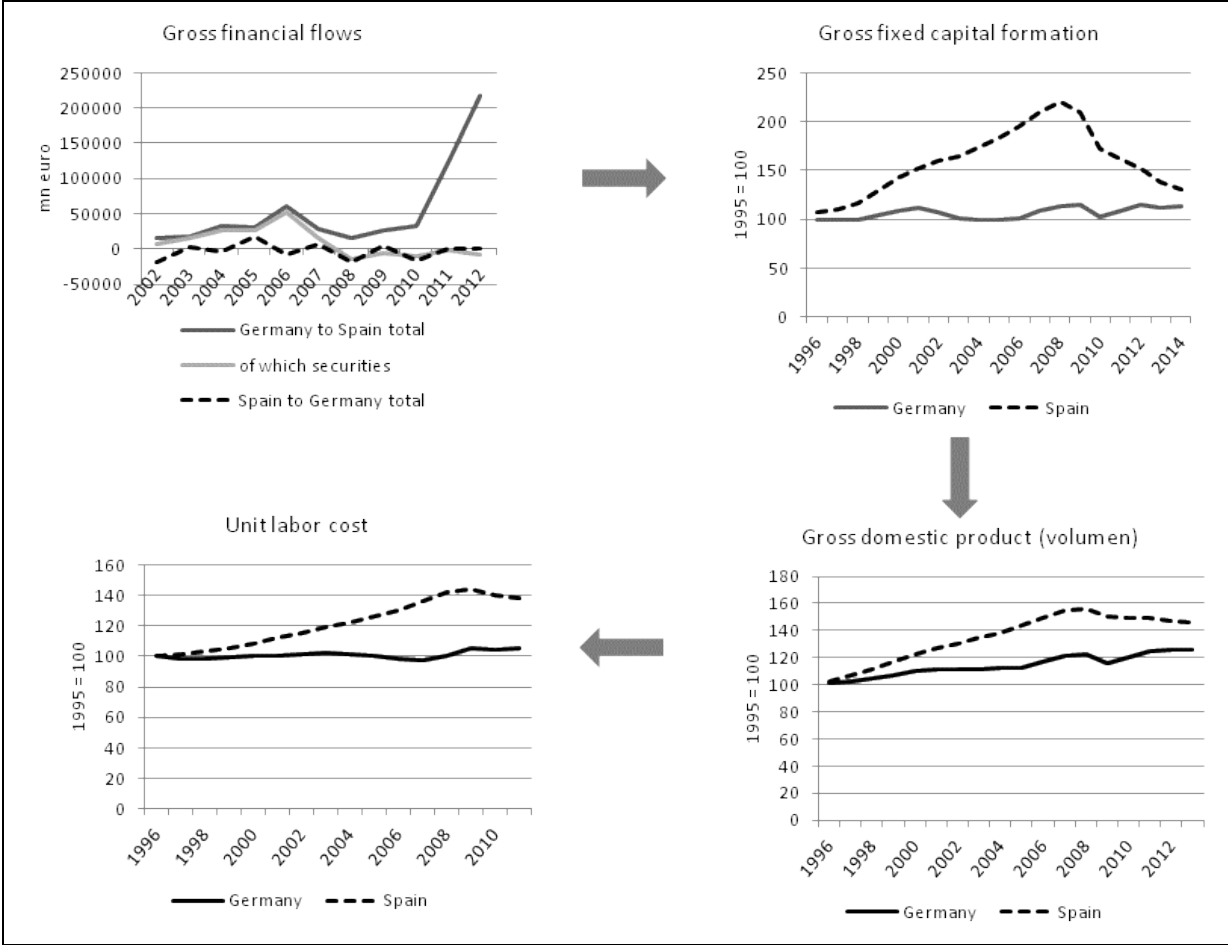
Figure 3 depicts that interest rate convergence also causes unit cost convergence, i.e., a deterioration of price/cost competitiveness against country D to name it as a by-product of cross-border finance. If the marginal cost curve  $\overline{C_1 C_1}$  were dominated by labor costs, the rightward shift of the demand curve would entail an increase in marginal unit labor costs towards point Z. A horizontal cost curve would be possible when the supply of production factors is infinitely elastic (the dotted continuation of  $P_K^I$ -line from  $T$  until H2). In this case, the total effect of an increase in the demand price for capital goods would be reduced to an increase in aggregate demand. The other extreme would be a vertical cost curve until H1. The total effect would be reduced to an increase in the unit labor costs with no increase in

aggregate demand. Between these two extreme possibilities, we find real world combinations of demand and cost effects. Again, the type of refinancing in the financial sector of D decides whether a downward motion follows along the cost curve in D. Decreasing costs are likely if financial resources were simply switched from D to S, and investment demand in D would have shrunk.

3.3 An example: Germany and Spain

Figure 4 demonstrates how the effects of financial flows are channeled through the EA’s real economy, using the example of Germany (D) and Spain (S). The gross financial flows of German residents to Spain exceeded the flows in the opposite direction at any time. They decreased somewhat between 2007 and 2010, but revived later considerably, although Spain improved its intra-EU trade balance recording a surplus since 2010 after a period of large deficits. The reasons for continued and even enlarged financial flows are transfers through

Figure 4: The mechanism at work in the real world: Germany and Spain



Note: Gross domestic product at market prices; unit labor cost: nominal wage increase over productivity increase.  
 Sources: Hobza and Zeugner 2015 (gross financial flows); Eurostat; author’s presentation. des Autors.

the EA-TARGET system and from several assistance facilities, while securities (bonds and others) have dominated the financial flows until 2007. The linkage with the different development of gross fixed capital investment in both countries suggests itself. We may associate the arrow with another figure depicting the convergence in long-run interest rates. Directly below the investment chart, we find the different paths of the gross domestic product, and finally at the lower left side, the real appreciation of Spain against Germany, measured by the two lines of the unit labor costs. Again, we may associate the arrow with a figure that depicts demand for labor in both EA economies.<sup>10</sup>

#### 4. Other interpretations

I attempted to apply a monetary approach to trade imbalances and changes in competitive positions. This idea is shared by few, and these few have an intuitive understanding in their empirical research instead to explain the impact of modern finance on the real economy. Despite many differences in theory and political orientation, most politicians, economists, and the press are apt to explain the imbalances in Europe by real economy events, chiefly different wage policies in countries. At the risk of oversimplifying their differences, the other interpretations could be placed, in political terms, into two camps: the post-Keynesian camp blames wage policies in the EA core, and the neoclassical (or, if one desires, the mainstream) camp blames undisciplined wage policies in the periphery as responsible for the latter's trade deficits. For both, Stockhammer (2011: 91) summarizes: “...*wage policy has a critical role in the rebalancing of European economies.*”

Many post-Keynesian authors (among others, Flassbeck 2007, Lapavitsas et al. 2010, Stockhammer 2011, Pérez-Caldentey and Vernengo 2012: 19ff, Bibow 2015: 15ff) argue with politically initiated wage moderation in Germany, which induced a real depreciation for Germany. Perhaps mostly consistent, Heiner Flassbeck (2007, 2015) represents this view. He writes (Flassbeck 2015) that ‘*wage moderation in Germany (politically volitional and initiated) induced a real depreciation, and this according to the most simple market theory, might have led economic agents in other EA countries to buy more German commodities, the prices of which have become relatively cheaper. (...) One may observe a change in the*

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<sup>10</sup> The correct indicator for labor demand is the vacancy rate. The rate increased strongly in Spain in the run-up to the crisis, while it fell in Germany (see: <http://www.tradingeconomics.com/spain/job-vacancies>).



*relative prices after an exogenous push (here, wage contracts) on the one side, and, on the other side, a change in the net commodity trade that fits in this case'* (my translation). Such reasoning would be correct if physical ('net commodity trade') and financial resource flows were identical, which they are not. In addition, I am not sure that one may *a priori* conclude from wage contracts below the rate of productivity on trade surpluses (and net capital export). A general wage reduction in the aggregate level can have various responses on the firms' level. Whatever will occur there, each traded good is different with respect to the combination of cost and profit factors. An aggregation of different micro situations into a true macroeconomic statement needs to be proved (more on this issue in the next section).

Likely, the majority of European economists argue with a mirror-imaged view on wage policies. They conclude on harsh wage reductions in deficit countries, if necessary through a devaluation of the nominal exchange rate after the reintroduction of an own currency. However, the reasoning is different; definitely, the interest rate does matter, as in Sinn (2010). The rate of interest is seen as the relative price of the physical resource capital measured as its marginal product. The physical marginal product of capital is higher in less developed countries with lower capital endowment compared to higher developed countries with lower labor endowment. Thus, less developed countries should offer a higher price (interest rate) of capital. However, modern financial flows are largely detached from real resource flows and determine the interest rate of an economy completely independent of the marginal product of physical capital. Nevertheless, capital flows from the northern EA countries to the peripheral countries actually followed the prediction, at least in the run-up to the financial crisis. However, theory and the real world would be consistent only if there were a close linkage, an identity between financial and physical resource flows. Perhaps,<sup>11</sup> we may expect such a linkage in the case of foreign direct investment, and usually a capital-augmented Balassa-Samuelson framework is applied in empirical research (e.g., Belke et al. 2013: 6), but mostly without statistically significant results.

Amit Bhaduri applies a completely different approach in his essay from 2011. He writes (Bhaduri 2011: 11):

*"Similarly, expected capital gains due to booming asset prices usually attract capital inflow from overseas, and the corresponding capital account surplus in*

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<sup>11</sup> The 'perhaps' is justified because a foreign investment is very often the take-over of an existing capital stock (brownfield investment) and not the installation of new capacities ('greenfield investment').

*the balance of payments would have its counterpart in current account deficit provided compensating capital movement is included in the capital account. On this accounting convention, the current account balance  $B$ , defined as export plus net factor income minus import, adjusts to capital account inflows and outflows to keep the overall payments in balance. Without specifying the possible routes through which such adjustments might take place, for our present purpose we merely note that inflow on the capital account (especially portfolio investment for acquisition) is encouraged by capital gains, and  $G$  has a depressing effect on the current account  $B$ , while higher income stimulating imports has a negative effect on the current account balance.*

Bhaduri assumes that notional capital gains induce non-financial corporations to deviate their financial resources from real capital investment into financial capital because the latter yields a higher return, and thus, private investment would shrink. Notional capital gains lure foreign capital inflows, and the trade balance deteriorates. Certainly, this finding follows from an effective demand approach, and we cannot exclude such an effect – but where? A possibly negative effect on physical investment in the capital exporting country may be offset by a positive interest rate following an asset boom in the capital receiving country. Furthermore, Bhaduri's model cannot explain the routes through which a capital inflow deteriorates the trade balance because the interest rate, money and credit do not play any role. In addition, Bhaduri's examination cannot explain the high investment-driven growth in the peripheral EA countries despite high capital gains in the run-up to the financial crisis.

## **5. Empirical studies**

There are few empirical studies that assume a reversed causality and that cost and price competitiveness has a minor impact on trade imbalances at best.<sup>12</sup> However these studies do not explain the linkage between cross- border and external imbalances in the EA.

Related to the (above mentioned) idea that a general reduction of wages helps to improve competitiveness, Naastepad and Storm (2014) note that labor cost is a fraction of overall production costs of a commodity. The share of wage costs in the supply price is lower because of the mark-up rate on costs. The authors calculate these 'prices' on the industry level from statistics and find that unit labor costs determined the output price of the South European countries by 16 per cent on average, whereas another 70 per cent of the supply price was

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<sup>12</sup> I disregard the well-known carry trades. They are a relevant problem in the financial relations between developed and less-developed countries with own currency, and I focus on studies on the EA.

caused by the cost of intermediary imports. For Southern Europe, the authors find also an increase in unit labor costs by 1 percentage point to induce the output price to increase by 0.18 percentage points. The authors argue that trade balances should be better evaluated by means of export and import functions. They find that debt-financed aggregate demand plays a greater role than price competitiveness of domestic supply.

Comunale and Hessels (2014) argue that financial integration has brought the financial cycle closer to the business cycle. The authors investigate how far current account balances in the Euro zone are caused by differences in price competitiveness or by demand fluctuations generated by the financial cycle. They apply panel error-correction models to exports, imports and the trade balance and find certain statistically significant impacts of differences in price competitiveness for certain EA countries. However, differences in the domestic aggregate demand were more important. The financial cycle would explain the trade balance better than fluctuations of the 'normal' domestic business cycle.

Detzer and Hein (2014) argue that financialization had a dominant impact on EA trade imbalances through domestic demand and not differences in unit labor costs. In Germany, financialization has contributed to subdued demand, and the government followed a mercantilist policy to achieve permanent export surpluses, whereas other countries generated a debt-led consumption boom. They find that the current account surpluses of Germany were not predominantly caused by a moderate wage policy and labor market reforms, but mostly by a revitalization of world demand for specific German products (investment goods). However, the authors do not work out a coercive economic link between financialization and favorable world demand conditions; instead they appear to understand such a link rather as different policy responses to financialization.

Díaz Sanchez und Varoudakis (2013) consider the real exchange rate, the current account, the real long-run interest rate, and the growth rate of the GDP as possibly being endogenous to each other. They apply a panel VAR to the EA, its core and periphery. They find that current account imbalances of the peripheral countries were merely caused by changes in the competitiveness indicators, but rather by a domestic demand boom, triggered by greater financial integration and intra-regional capital flows; the latter is modeled with the real (!) interest rate. However, current account surpluses of the core countries were also statistically, although not exclusively, explained by competitiveness reforms. This finding partly supports

the critiques of Germany's wage policy. However, as always in empirical research, the results are sensitive to econometric methods and data. My co-author Karsten Staehr and I applied Granger causality tests and VAR modeling to a panel of 27 EU countries and various sub-panels to identify these causalities (Gabrisch and Staehr 2014, 2015). In all test versions, we find that an appreciation of the real exchange rate, which is indicated either by relative unit labor costs or by the inflation differential, statistically follows a net inflow of capital and not vice versa.

## **6. Closing remarks**

This study has sought to show that the virtual explosion of cross-border financial flows in the global as well as the EA economy is the result of the opening and deregulation of financial markets and the following rise and frequent changes in the state of confidence, and not of developments in the real economy. However, cross-border financial flows entail adjustments in the real economy of participating countries, among them competitive positions and external imbalances. The lens of the liquidity-preference theory helps to identify the interregional asset-price-interest mechanism as the transmission channel from financial to real economy developments in the monetary union. Systematic empirical research on the EA has supported the view that it is not the wage policy but the uncontrolled life of financial markets and institutions in the EA that is responsible for external imbalances and the split of the monetary union into debtor and creditor countries. Therefore, we may state that the political debate in Europe is heavily distorted. The debate circles around the issue of how to reform rigid labor markets to reduce unit labor costs. The control and reduction of destabilizing finance is not at the heart of the debate. The knowledge exists regarding how one can do this; it is a political implementation problem, and its discussion goes beyond the scope of this essay.

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