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## The finance-dominated accumulation regime, income distribution and the present crisis<sup>\*</sup>

Engelbert Stockhammer<sup>†</sup>

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**Abstract** — *The paper discusses the interactions of changes in income distribution and the accumulation dynamics in the post-Fordist accumulation regime in OECD countries, which is characterized by deregulated financial markets. The neoliberal mode of regulation came with a decisive shift in power relations at the expense of labor, which is clearly reflected in the fall of wage shares across OECD economies. The notion of a “finance-dominated” accumulation regime is proposed to highlight that financial developments crucially shape the pattern and the pace of accumulation. Financial globalization has relaxed balance of payment constraints and thereby allowed the build up of big international imbalances. The combination of real wage moderation and financial liberalization has led to different strategies (or at least outcomes) in different countries. While some countries (like the USA) exhibit a credit-fuelled consumption-driven growth model that comes with large current account deficits, others (like Germany and Japan) show an export-driven growth model with modest consumption growth and large current account surpluses. Overall the finance-dominated accumulation regime is characterized by a mediocre growth performance and by a high degree of fragility.*

**Keywords:** financialization, finance-dominated accumulation regime, macroeconomics, financial system, financial stability, income distribution, debt-led growth, export-led growth

**JEL-Classification:** B50; E20; E21; E 29; E44; E60; P17

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## Introduction

In the second half of 2008 a serious financial crisis that had begun with the bursting of the property price bubble in the USA turned into the worst economic crisis since the 1930s. This paper contributes to understanding the macroeconomic dynamics that underlie the present crisis. In doing so, first, the notion of the neoliberal mode of regulation and the finance-dominated accumulation regime, in which the pattern of accumulation is shaped by developments in the financial sector, are proposed. This accumulation regime is characterized by low and fragile growth. Second, the interaction of distributional dynamics and the dynamics of accumulation are highlighted. A polarization of income distribution has been an important feature of the finance-dominated accumulation regime, even if the macroeconomic effects have been different in different countries. While some countries have compensated a stagnant demand with debt-financed consumption, others have compensated it with increasing net exports. Third, the present crisis and the stagnation of wages for large parts of the working classes are intrinsically linked. One underlying cause of the present crisis has been the persistent international imbalances and the associated massive capital flows.

The notion of financialization covers a wide range of phenomena: the deregulation of the financial sector and the proliferation of new financial instruments, the liberalization of international capital flows and increasing instability on foreign exchange markets, a shift to market-based financial systems, the emergence of institutional investors as major players on financial markets and the boom (and bust) on asset markets, shareholder value orientation and changes in corporate governance (of non-financial business), increased access to credit by previously ‘underbanked’ groups or changes in the level of (real) interest rates.

Financialization has also been used to highlight changes of psychological and ideological structures. The list could easily be extended. This paper aims at exploring what (some of) these changes mean for macroeconomics.<sup>1</sup> To do so, the macroeconomic structure will be explored by means of the standard Keynesian expenditure function. Aggregate expenditures consist of private consumption ( $C$ ), investment ( $I$ ), net exports ( $NX$ ) and government expenditures ( $G$ ):  $Y = C + I + NX + G$ .<sup>2</sup> Each of these components will be investigated to

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<sup>1</sup> Financialization is not the only important change in the macroeconomy. In the relevant period globalization and a technological revolution centered around information and communication technologies (ICT) have taken place. One limitation of this paper is that it makes no attempt to disentangle these effects.

<sup>2</sup> One can also look at these relations in terms of savings behaviour of the various sectors of the economy. The savings of households ( $S_{HH}$ ), of corporations ( $S_C$ ), of government ( $S_G$ ) and of the foreign sector ( $S_F$ ) has to add up to zero:  $S_{HH} + S_C + S_G + S_F = 0$ . In other words, for each debtor there has to be a creditor. Not all sectors can

analyze whether changes that can plausibly be linked to financialization have occurred and modified the relevant behavioural pattern.

The argument is presented in a regulationist framework<sup>3</sup> to highlight that the macroeconomic dynamic (described as the “accumulation regime”) is embedded in a particular institutional setting (the “mode of regulation”). While there is a universal agreement that the Fordist accumulation regime has come to an end in the course of the 1970s, there is no agreement on how to characterize the post-Fordist regime. After an initial emphasis on flexibility and, later information and communication technology as driving forces of the accumulation regime, financial factors have recently received more attention. The notion of a “finance-dominated” accumulation regime is proposed to highlight that financial developments crucially shape the pattern and the pace of accumulation. The paper argues that these effects of financialization give rise to a coherent, if fragile, pattern.<sup>4</sup>

In a nutshell, our story is the following. Due to the shift of power relations in the neoliberal mode of regulation, income distribution has changed in favour of capital. This change in distribution has interacted with macroeconomic changes caused by financialization. Important changes have taken place within domestic economies as well as regarding their insertion into the international economy. In the finance-dominated accumulation regime consumption expenditures can become the driving force for growth as households gain improved access to credit. This in some countries has counteracted the dampening effect of worsening income

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run a deficit at the same time. Inversely, not all sectors can decrease their deficits simultaneously. Note that government savings is the negative of the budget deficits (i.e. the budget surplus) and that the savings of the foreign sector, that is capital inflows, is equal to the negative of net exports.

<sup>3</sup> Classical works of the (French) Regulation Theory include Aglietta (1979), Lipietz (1985) and Boyer (1990). Similarities between the Regulation Theory and the (American) Social Structures of Accumulation approach (Gordon, Edwards and Reich 1982, Bowles, Gordon, Weisskopf 1983) are now widely recognized (e.g. McDonough and Nardone 2006). The question how national accumulation regimes interact has received limited attention within the regulationist approach. Becker (2002) and Becker and Blaas (2007) highlight differences along the axes of intraverted versus extraverted accumulation and productive versus fictitious accumulation.

<sup>4</sup> The term *finance-dominated* rather than finance-led is used to highlight that financialization is shaping the pattern of accumulation (or put in another way: the composition of the components of aggregate demand and their volatility). Boyer (2000), in a seminal paper, uses the term *finance-led*, a term that is related but different. Boyer defines an accumulation regime as finance-led if an increase in the financial norm, that is the hurdle rate set by financial markets for investment projects, leads to an increase in growth. No presumption of this sort is made here. Rather a finance-dominated accumulation regime is defined in such a way that financialization can positively or negatively affect growth. While the term “finance-dominated” has, to my knowledge, not been used before, other authors have put forward arguments in a similar spirit. Aglietta and Rebérioux (2005) use the term “finance-led” an analysis centering around shareholder value without implying that the finance-led regime would automatically give rise to high growth. Brenner (2003) highlights how a boom turned into a bubble without invoking the notions financialization or finance-led growth. He highlights the importance of international exchange rates policies for the competitiveness of the US manufacturing factor. Both contributions also emphasize the instability of the finance-dominated accumulation regime.

distribution on consumption expenditures and stimulated consumption growth. However this creates new potential for instability as servicing high debt levels may become difficult in recessions. Investment expenditures are sluggish due to shareholder value orientation, increased uncertainty, and the strong (standard) accelerator effects in the investment function. Increased profits do not translate into higher investment. Financialization has also affected how national economies interact. Deregulation of financial markets has allowed to temporarily sustain large current account deficits, but also led to an increase of capital flows and, as a consequence, volatile exchange rates. This translates into an increase in uncertainty and repeatedly to severe currency crises. It also means that some countries have run substantial current account surpluses while others run deficits. In particular, in several countries a credit-financed consumption boom with substantial current account deficits has emerged, while others have relied on export-driven growth (and subdued domestic consumption) and run substantial current account surpluses. Overall the finance-dominated accumulation regime thus comes with moderate growth in aggregate demand and exhibits a high degree of fragility with crises typically emanating from international (foreign exchange) or domestic financial markets.

This paper takes a comparative approach with a focus on developments in Western European countries. The paper is thus guilty of a strong dose of Eurocentrism. However, it contains an important contribution to the debate on financialization. Most of the empirical literature (Duménil and Lévy 2001, Brenner 2003, Crotty 2003, Krippner 2005) has a focus on the USA. This is because financialization is presumably most developed in the USA and because data availability is, for many questions, better. However, financialization will have different effects on different economies. This is for (at least) three reasons. First, the USA (and the UK) are international financial centers and it is not obvious that the financial centers and the financial periphery will be affected in parallel ways. Second, financialization is not only the result of exogenous developments (say in technology), but it is the outcome of policies. As political developments differ in different regions, European developments have to be analyzed in their own right. In particular, financial deregulation in European countries as well as monetary policy are strongly shaped by the particular (neoliberal) path of European integration (Bieler 2003). Third, financial liberalization has allowed for large current account surpluses. For some period of time financial liberalization thus has, ironically, increased the potential for different developments across countries. In particular, wage moderation has resulted in different national strategies (or at least outcomes). In the finance-dominated

accumulation regime there is thus a credit-driven growth model as well as an export driven one.

The paper is structured as follows. Section two provides the background by discussing the neoliberal mode of regulation. Sections three, four and five discuss potential changes due to financialization in consumption behaviour, investment behaviour and net exports respectively. Section 6 looks at changes in government expenditures. Section 7 summarizes the macroeconomic pattern resulting from the finance-dominated accumulation regime. Section 8 discusses the relation between the finance-dominated accumulation regime and the present crisis and section 9 concludes by highlights how growing inequality has been one of the factors underlying the global imbalances that contributed to the present crisis.

### **The background: a neoliberal mode of regulation**

Regulation theory conceptualizes the accumulation process as embedded in a certain institutional structure, the mode of regulation. The socio-economic basis of the finance-dominated accumulation regime is the neoliberal mode of regulation. Space limitations prevent an extensive discussion of neoliberalism. It will thus have to suffice to highlight some key points of the neoliberal mode of regulation.<sup>5</sup>

First, a shift in power from labor to capital has occurred. Depending on the country and region this was due to outright attacks of governments on labor unions (under Reagan and Thatcher) or an erosion of the organizational strength of labor (partly because of high unemployment in continental Europe) and of increased power of capital in part due to more effective threats associated with capital mobility due to globalization. This shift in the balance of power is clearly reflected in changes in income distribution. Wage shares have been falling across Europe, in Japan and the USA (see Figure 1). Moreover, the USA has witnessed stagnant median wages and a strong increase of inequality in personal income distribution.<sup>6</sup>

Figure 1

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<sup>5</sup> One might also call the present accumulation regime a “neoliberal accumulation regime”. At this stage the term finance dominated is used to highlight how changes in the financial system affect the components of demand. On neoliberalism see Harvey 2006, Glyn 2004, Dumenil and Levy 2004.

<sup>6</sup> Based (CPI-adjusted) data available from the OECD, median weekly wages have grown by a mere 2.8% from 1980 to 2005, the bottom quartile of wages fell by 3.1% and the top10% increased by 21%.

Second, a redefinition of the role of the state has taken place. The dominant economic ideology has shifted from one of limited, but substantial state intervention to one of radical laissez faire. This has provided the justification for a wave of privatization and deregulation in many areas. These deregulations range from product market deregulation, flexibilization of the labor market to deregulation of financial markets. Particularly important with respect to financialization is the deregulation of financial markets and a shift in the goal of monetary policy, which used to support fiscal policy in its pursuit of full employment during the Fordist regime. In the neoliberal regime price stability has become the predominant and often the only policy goal of monetary policy.

It is important to realize that neoliberalism does not just mean deregulation, but a selective form of deregulation. In many areas a re-regulation is taking place. This is most obvious in the case of the European Monetary System, that has been regulated and designed in various forms over the past three decades. Neoliberalism is the outcome of political decisions. In continental Europe many of these decisions were decreed at the European level. The Maastricht Treaty, the Stability and Growth Pact, the Services Directive, to name but the most important ones, have been crucial vehicles to push forward the neoliberal agenda.<sup>7</sup>

### **Consumption expenditures**

There are two conflicting effects of financialization on consumption expenditures. First the deterioration of income distribution puts a downward pressure on consumption, because working class households have a higher consumption propensity than earners of capital income. Second, financialization has increased the access of households to credit. In combination with real estate booms this has often led to credit-financed consumption booms.

In the 1990s private consumption expenditures became the main driving force in GDP growth in the USA. Indeed, the consumption share in GDP had been increasing since the 1970s. Macroeconomists rediscovered the wealth effect to explain this. The falling saving rates were thus explained by the rise in the value of financial assets because of the stock market boom.<sup>8</sup>

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<sup>7</sup> However, this is not to say, that the EU is a homogenous agent in pursuit of neoliberal goals. Rather it has its own internal conflicts and contradictions. Van Apeldoorn (1999) has coined the term 'embedded neoliberalism' to describe the predominantly neoliberal orientation of the EU policies that at the same time includes social aspects (thus the adjective embedded).

<sup>8</sup> Brenner (2003, 191) argues that most of the fall in the savings rate (in the late 1990s) occurred in the top income groups, who also benefited most from the increase in financial wealth. This, admittedly, fits uneasily

In the late 1990s a 5% marginal propensity to consume out of financial wealth was often quoted (with some more qualification for European countries; e.g. Boone et al. 1998). To the surprise of many economists, the stock market crash in 2000 did not result in a slowdown in consumption growth. The unabated consumption boom in the USA was then explained by booming house prices. Residential property was thus identified as the key source of the wealth effect. Several studies claimed to find substantially higher marginal propensity to consume out of property wealth than out of financial assets (Case et al 2001, Catte et al. 2004, Girouard et al. 2006). One of the reasons that housing wealth is supposed to drive consumption expenditures is that residential property is more frequently accepted as collateral.

While there is substantial evidence for the USA (albeit based on a short period of observations!) to back up this story, the evidence on European economies was always much thinner. Typically the wealth effects estimated for European economies were not statistically significant and/or much smaller. Moreover the US housing market differs from those in continental Europe and reliable data on (aggregate) house prices is not readily available.

Booming property prices and a mortgage fuelled consumption boom, however, only cover parts of how financialization may affect consumption behaviour. More generally speaking, financialization has given households more access to credit. Access of credit, of course, is not restricted to mortgages, but also includes other forms of consumer credit, credit cards and overdraft bank accounts. Consequently household debt has been increasing. As there is little systematic literature on changes in the marketing policies of banks, it is impossible to say to what extent the higher exposure of households is due to their decisions due to improved access to credit because of housing wealth and to what extent it is due to more aggressive policies from banks.<sup>9</sup> The USA, the UK, Ireland and Spain experienced property bubbles that were accompanied by strong increases in household debt ratios.

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with the argument made here. Evidence for the early 2000s, however, suggests that the debt burden has grown fastest for middle class households (which is in line with our argument) (State of Working America 2006/2007). This issue require further research.

<sup>9</sup> The mainstream literature assumes that households are rational. They increase their debt ratios because their wealth increased. While this is probably part of the story, it is also conceivable that a substantial part of the accumulated debt is due to households irrationally maintaining consumption levels that are unsustainable. As wages have stagnated in many countries, but consumption norms as represented in mass media have arguably increased, many households could have been driven into debt. Moreover, there is evidence from experimental psychology that the means of payment influences consumption decisions: consumers typically buy more when using credit cards. This is another indication that debt ratios are in part not due to rational decisions.



Household debt is difficult to measure and international comparisons chronically suffer from deficiencies in comparability of data due to different financial institutions and practices in different countries. Therefore debt ratios should only be compared with caution. Table 1.1 summarizes data from Girourard et al. (2006), which contains the OECD's estimates of household debt compared to disposable income. European countries display a wide range of debt to income ratios, which may in part be due to problems in data comparability. However all European countries (for which data is available) have experience rising debt ratios since 1995. Notably the (unweighted) average of the debt ratios of the European countries is similar to the USA.

Insert Table 1.1 and 1.2

OECD data also show that (household) savings rates are falling throughout the OECD countries, with the most pronounced fall occurring in the USA. Surprisingly, however, it turns out that this is not mirrored in the consumption data in Table 1.2, which reports private consumption expenditures as percent of disposable income by decade.<sup>10</sup> While the USA (and Japan) have experienced a substantial and consistent increase of consumption compared to disposable income since the mid 1980s, the same is not true in Europe. In most countries, notably France and Germany, the changes in the consumption share are in the order of magnitude that are within the range of a business cycle. There was a strong increase in Greece and a strong decrease in Ireland. The (unweighted) average of the EU15 is unambiguously flat with no change in the consumption ratio of economic significance.

At the same time European countries have experienced a substantial decline in the wage share. As wage incomes are typically associated with higher consumption propensities than profit incomes, this ought to lead to a decrease in the consumption share. Stockhammer et al.

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<sup>10</sup> As we lack an exact date for the end of Fordism and the beginning of the neoliberal mode of regulation, decades are used for periodization, which gives 10-year averages (except for the 2000s where the latest available data is used). These periods are long enough to iron out most of the fluctuations associated with the business cycle. The 1970s are the final decade of the Fordist era (or if one prefers the period of the crisis of Fordism). Neoliberalism was inaugurated by Margaret Thatcher, Ronald Reagan, Helmut Kohl coming to power and coincides with an abrupt shift in monetary policy in the late 1970s/early 1980s. In the European context this periodization is convenient because the first neoliberal decade (the 1980s) includes the European Monetary and Exchange Rate System (EMS). The second neoliberal decade (the "1990s") begins with the implementation of the Single Market and is characterized in terms of economic policy by the Maastricht Treaty and the following Stability and Growth Pact (SGP). The final period (the "2000s") is shorter and therefore may reflect the cyclical downturn in this period. Any periodization is arbitrary in detail, however changes in periodization should make little difference for the overall picture.

(2009) find a saving differential of around 0.4.<sup>11</sup> Given that wage shares have declined by some 10 %-points since 1980, consumption shares ought to have declined by some 4% points (of GDP) over this period due to income distribution. If so, increased debt could have compensated this decline.<sup>12</sup>

## **Investment**

Financialization brought about many changes that potentially affect business investment (that is physical investment by firms): new financial instruments have changed financing patterns, shareholder value orientation affected management goals, instability on financial markets could increase uncertainty for firms, to name some of them. However, it has been hard to pin down these effects. In part this is probably due to the fact that the effects of financialization are difficult to measure, in part this may be a mere reflection of the fact that business investment has always been the macroeconomic variable that is hardest to explain for economists.

One of the most important changes in investment behaviour is due to the increased role of shareholders in the firm. Rather than a management-labor balance (like in the Fordist era), firms are now characterized by a management-shareholder balance. Several contributions have discussed the microeconomics of shareholder value orientation. Lazonick and O'Sullivan (2000) argue that a shift in management behaviour from 'retain and reinvest' to 'downsize and distribute' has occurred. More formally, Stockhammer (2004) shows that an increase in shareholder power will modify the desired profit-growth frontier for the firm. His estimations suggest that financialization may explain a substantial part of the slowdown in accumulation. However, results vary widely across countries (strong effects in the USA and France, weak effects in Germany).

A second change for investment behaviour has been in the economic environment that firms face. Volatility on financial markets has increased substantially in the course of financial deregulation. As a consequence firms face a higher degree of uncertainty which may make

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<sup>11</sup> This value is in line with comparable studies for other groups of countries (Naastepad and Storm 2006/07, Hein and Vogel 2007).

<sup>12</sup> There is an additional channel through which financialization may have affected consumption expenditures. In many countries the pay-as-you-go pension systems are being reformed or have been questioned. Typically some version of a capital-based system is envisioned in which households have to invest their savings (usually via funds) in the stock market. This should lead to an increase in savings as households have to put more aside for retirement. I am not aware that this channel has been investigated empirically.

physical investment projects less attractive. In particular volatility of exchange rates seems to have had some effects on manufacturing investment. However, uncertainty is hard to measure and estimation results from the existing literature are not conclusive enough to suggest a clear order of magnitude of the effect (Carruth et al 2000, Stockhammer and Grafl 2008).

Firms have overall not used new financial instruments to expand their investment expenditures. In the Anglo Saxon countries the buy back of corporate shares has led to an overall negative contribution of the stock market to the finance position of non-financial businesses (Schaberg 1999). Non-financial firms seem to increasingly rely on internal finance for investment projects. Overall non-financial businesses seem to move from a net debtor position to a neutral or net creditor position. However, data on these issues are not readily available or comparable.<sup>13</sup>

Here we contend ourselves to highlighting the changing relation between profits and investment. In the major economies (Germany, France and the UK as well as the USA) the investment/profit ratio shows a clear declining trend. Some countries like Greece and Spain show an increasing trend. The unweighted average for the EU countries for which data is available has declined from 47% in the 1970s to 40% in the 2000s (see Table 2).

Insert Table 2

As the measure of operating surplus used here (as well as in the National Accounts) is a broad one that consists basically of all non-wage incomes, part of the reason for the declining trend in the investment operating surplus ratio is due to a change in the composition of the operating surplus. Interest and dividend payments have increased (Duménil and Lévy 2001, Crotty 2003). However only for few countries, namely for the USA, is data readily available.

While Table 2 is a striking illustration that higher profits do not automatically lead to higher investment, this need not be all that surprising. Keynesians have long maintained that investment is about expectations rather than profits. Kalecki pointed out that the causation may be inverse: investment causing profits, rather than the other way. Empirically, profits

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<sup>13</sup> Duménil and Lévy present data for France and the USA. Stockhammer (2004a, Table 5.5) summarizes data on several major economies. However, changes in the System of National Accounts make it impossible to update the data. OECD (2007) summarizes available data for selected OECD countries which confirm that corporations move towards a net lending position.

play a modest role in determining investment. Ford and Poret (1991) find no evidence that profits affect (aggregate) investment and Stockhammer et al. (2009) report minor effects for the EU12. Onaran et al (2009) present econometric evidence for the negative effect of dividend and interest payments on investment.

Overall financialization has had a dampening effect on business investment, probably due to negative effects of shareholder value orientation and increased uncertainty.<sup>14</sup> Nor is there much evidence that other than in Ireland (and maybe in the Netherlands) residential investment has been strongly affected by rising household debt levels.

### **The foreign sector**

In the aggregate expenditure function the foreign sector is represented by net exports. Over longer periods net exports will be balanced for most countries and, indeed, for the Euro area as a whole (but not within the Euro area) net exports are of a minor magnitude. However, financial liberalization and globalization have allowed countries to sustain current account deficits at higher levels and for longer periods than previously. The flip side of the current account is net capital flows. It is important to realize that (abstracting from changes in Central Bank reserves) net exports have to equal (net) capital outflows. Inversely, a current account deficit corresponds to capital inflows. Financialization has thus allowed countries to run larger current account deficits, provided that they can attract the corresponding capital inflows. Indeed the standard deviation of the current account/GDP has increased substantially since the mid 1980s (Figure 2).

Figure 2.

The imbalances in international trade (Table 3) have also played an important role as a precondition in the building up of the bubble in the USA. The corresponding capital flows have provided vast amounts of capital in search of yield in US\$ assets. These they found in various derivatives based on mortgage and commercial credit, thereby fuelling the credit-

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<sup>14</sup> Notably, there has been no renewed interest in the effect of share prices on business investment (quite in contrast to the research on consumption expenditures and share prices). As in the early 1990s (Chirinko 1993, Ford and Poret 1992), most empirical economists would probably agree that share prices have little, if any effect on investment.

financed consumption boom. Without capital inflows the bubble in the USA would probably not have inflated as much as it did.

Table 3.

Financial liberalization and globalization has thus, ironically, increased the potential for different developments across countries – if only as long as international financial remain calm. However the capital flow that underlie the trade imbalances may abruptly halt or reverse and thereby cause severe crisis. The macroeconomic dangers of volatile capital flows have so far been felt mostly in emerging economies. Mexico 1994, Turkey 1994 and 2001, several countries in the course of the South East Asian crisis 1997/98, and Argentina 2001 are all examples of such crises related to capital flows. All of them have led to severe recessions (at times with double digit declines in real GDP), some of them long-lasting, others more short-lived.<sup>15</sup> However, the EMS crisis 1992/93 also shook developed economies (although the exchange rate devaluations were not as strong, nor were the following recessions.)

The reason why changes in the exchange rate have such a devastating effect is that in liberalized international markets it is usually profitable to engage in interest arbitrage, that is borrow in one currency and invest or lend in another (often called carry trade). If, say, interest rates in Turkish Lira are higher than those in Euros (with exchange rates expected to be stable), it is tempting to take out a euro credit and lend in Turkish lira. By implication, assets and liabilities will then be denominated in different currencies (a related risk is that of the maturity of assets). An abrupt exchange rate realignment may then have disastrous effects on firms' or banks' balance sheets.

International exchange rate arrangements seem to be key to understanding the accumulation and growth dynamics in the finance-dominated accumulation regime. For Europe, the most important institutional change in this area of course was the EMS (which effectively ended with the 1992/93 crisis) and European Monetary Unification. The introduction of the Euro was a reaction to the EMS crisis, where several countries had to devalue their currencies by some 20% (vis à vis the Deutsch Mark). At first, the Euro appears to have been a success. Not only was the new currency accepted by the public, but the Euro system also eliminated

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<sup>15</sup> The fact that some countries recover quickly after a deep recession, does not imply that everything returns to pro-crisis. Onaran (2009) argues that financial crises often lead to lasting changes in functional income distribution.

(nominal) exchange rate fluctuations and thereby the possibility of exchange rate crises. It also substantially decreased inflation and (real) interest rates in the formerly soft-currency countries. However, since inflation differentials persist across European countries, there have been creeping changes in real exchange rates that have accumulated over the years. Real exchange rates have diverged since the introduction of the Euro.<sup>16</sup> Germany has devalued by more than 20% in real terms vis a vis Portugal, Spain, and Ireland since 1999. This will pose a major challenge in the coming years, as the only way how these countries could gain competitiveness (in the absence of productivity miracles) is by keeping their inflation well below German rates for extended periods. But as German core inflation is already close to zero, this would imply deflation in these countries, which would require mass unemployment and falling wages. Europe has reacted to the liberalization of capital flows by introducing a common currency. While this has ended the risk of exchange rate crises, trade and cost-related imbalances are building up within the Euro area and there seems to be no mechanism for resolving these imbalances.

### **The state**

Downsizing the state was high priority on the to-do-list of neoliberals when they came to power in the 1980s and thereafter. Or at least so they claimed. It is remarkable that state shares in expenditures and receipts have not been reduced dramatically in OECD countries during the neoliberal era. In Figure 3, government total expenditures are depicted as % of GDP (source: OECD Economic Outlook database). While the *rise* of the state sector has clearly been halted after 1980, the state share has remained at the (historically) high level of the late 1970s.

Insert Figure 3

Only in three countries (Ireland, UK and the Netherlands) are state shares lower than they were in the 1970s. In most countries (and the median) state shares have increased until the early 1980s and stagnated thereafter. Given that most countries experienced a neoliberal

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<sup>16</sup> Presumably not all countries entered the Euro with the 'correct' exchange rate. In particular Deutsch Mark is often thought to have entered overvalued. However, if the real exchange rate realignments since 1999 were a correction of the initial values, one would expect the real exchange rates to stabilize after a while. As of now there is no indication for that.

hegemony of one form of another and the cut back of the state was one of the neoliberals' prime goals, this resilience of big government may be called the *neoliberal puzzle*.<sup>17</sup>

This does not mean that neoliberal hegemony has not affected the state. It has. State owned enterprises are not counted as state sector in the National Accounts and therefore most privatizations will not show up in the data.<sup>18</sup> Furthermore deregulation, not the least in the financial sector, has taken place. As it does not affect the economic *size* of the state it, again, will not show up in the data, even though the state *influence* in the economy may have decreased. What is measured as the size of the state sector here is in fact the size of state employment and transfers (and in some countries military expenditures). It thus includes the welfare states as well as government bureaucracy. Overall it is thus still remarkable how stable state shares have been.

### **The overall macroeconomic performance**

We can now summarize the findings on the finance-dominated accumulation regime. For continental European countries one does not find the strong evidence of a consumption boom (related with a property price bubble) that has been reported for the USA – despite the fact that household debt levels increased substantially. Consumption ratios are stagnant. However, given that income distribution has changed at the expense of labor, which should have decreased consumption ratios, it is plausible that debt-driven consumption has also fuelled demand in Europe to some extent.<sup>19</sup> Investment as such has not been a driving force of demand. In particular rising profits have not translated into rising investment. Presumably (but hardly conclusively) this is related to shareholder value orientation and increased uncertainty due to volatile financial markets. Liberalization of capital flows has relaxed current account-constraints on countries and led to volatile exchange rates, which however, have not translated into a severe crises in Europe (with the exception of the 1992/93 EMS crisis) as they did in South East Asia, Latin America or Turkey. The Euro system has effectively prevented currency crises. However, the Euro came with a policy package, the

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<sup>17</sup> Crotty (2003, 2005) also uses the term neoliberal puzzle and defines it as “financial markets demand that corporations achieve ever higher profits, while product markets make this result impossible to achieve” Crotty (2003, 271). Crotty’s neoliberal puzzle refers to the *economic structure*, where the notion used in this paper refers to *economic policy* making.

<sup>18</sup> The details may depend on the legal setting. Private firms owned by the state are not counted in the public sector. Firms that are institutionally part of the state (as in many cases the postal service) is counted.

<sup>19</sup> There is little evidence however, that this debt, much of which is mortgage debt, has caused a substantial increase in residential investment. The latter is falling as a share of overall investment.

Maastricht Treaty and the Stability and Growth Pact, that has fostered neoliberalization within Europe and led to a creeping divergence within Europe. Macroeconomic developments have thus been strongly influenced by exchange rate arrangements.

Overall the effects of financialization thus give rise to a finance-dominated accumulation regime that is one of *slow* and *fragile* accumulation. However, remarkably it has not led to a severe recession in Europe. Indeed mainstream institutions argue that the business cycle has become moderated (IMF 2006). Given our discussion so far, one might wonder why recessions have not been more harsher and more frequent. We might call this the *Minskyian puzzle*, as Hyman Minsky asserted that unregulated financial markets are prone to endogenous instability.

### **Why have recessions so far not been more severe in OECD countries?**

There are two related reasons to expect that the finance-dominated accumulation regime would lead to more volatility in output growth (and other macroeconomic variables). First, macroeconomic shocks from the financial sector have become more severe and more frequent. There is ample evidence that financial markets generate highly volatile prices. Overshooting is well established for exchange rates and the boom bust cycles of share prices has become evident (again) in the past years. Second, because of high debt levels, the fragility of the economy has increased. Financialization has encouraged households to take on more debt. This debt presumably either has fuelled consumption expenditures or was necessary to buy property in the face of soaring house prices. Either way, debt has to be serviced out of current income (or by ever increasing debt). Even temporary reductions in income may thus escalate if households have to default on their loans. While this need not happen necessarily, the *fragility* of the system has increased as the resilience of households against temporary shocks has decreased.

One would expect that this combination of more frequent crises on financial markets and high fragility of households to translate into macro economic volatility. However, overall, it is not clear whether growth has become more volatile (in OECD countries) in the finance-dominated accumulation regime. IMF (2007) presents evidence that business cycle have become more moderate since the 1970s. The devil, however, lies in the detail. While “output volatility (...) has been significantly lower than during the 1960s” (IMF 2007, 85), recessions



have become harsher in the Post-Bretton Woods era than in the Bretton Woods era (IMF 2002, Table 3.1). As output growth (and expansions) was much higher in the Fordist era than in the post-Fordist era, the IMF is correct in concluding that volatility has decreased. But this does not mean that recession have become less severe! Indeed, financial crises, have become more frequent and more severe (Eichengreen and Bordo 2003).<sup>20</sup> It is important to keep in mind that price variation of many financial variables (such as prices of shares or derivatives) have little direct impact on macroeconomic behaviour. Exchange rates seem to have strong and immediate impact only in the case of drastic changes. Currency crises and banking crises tend to have the strongest economic impact, stock market crises only a moderate one (see also Claessens et al 2008).

It is important to note that state shares are still substantially higher than at the time of Great Depression and, as pointed out, the neoliberal era has not reduced them substantially. Automatic stabilizers are thus in place and government consumption forms a sizable part of value added. Moreover, Central Banks in ACCs (in particular the Fed) have been pro-active in reacting to dangers of financial crisis. The resilience of a sizable government sector and (by historical standards) a functional welfare state combined with adept monetary policy may be the reason, why financial crises have so far not had a devastating effect on (advanced) economies.

### **The present crisis**

In September 2008 serious tensions on the financial markets turned into the worst financial crisis since the 1930s. After the collapse of Lehman Brothers core financial markets froze and only state intervention on an unprecedented scale prevented a total collapse of the financial system. However, state interventions were neither sufficient to stabilize the financial system nor to prevent the financial crisis to spread to the real sectors. Indeed, at the time of writing the world economy is facing the worst recession since World War II.

The financial crisis initially began in the subprime mortgage market (in the USA), a small segment of the mortgage market. However, by now the losses related to subprime mortgages (and the securities based on them) are only a modest fraction of the total (expected) losses to the financial sector. For example in Oct 2008 the IMF (2008) estimated the total losses 1400

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<sup>20</sup> In particular Eichengreen and Bordo report that there had been *no* banking crises in the 1945-73 period.

bn US\$, of which only 85 bn are directly related to subprime loans (including Alt-A loans) but 500 bn are related to mortgage backed securities (ABS and CDOs, excluding prime MBS). Clearly the subprime crisis was the trigger rather than the main cause of the crises.

One of the main drivers of the crisis was a huge property price bubble (in the USA, but also in the UK, Ireland and Spain). Real estate bubbles are prone to have strong real effects, because ownership of real estate is relatively widespread (compared to the ownership of other financial assets) and because real estate is widely accepted as collateral (again compared to other financial assets) by banks. Mortgage lenders trusted that property prices would continue to appreciate (Gerardi et al. 2008) and extended credit on an increase in the value of a property, which effectively fuelled consumption expenditures. These equity withdrawals amounted to no less than 10% of labor and transfer income in 2003-06 (DiMartino and Duca 2007, Chart 7). Banks also relaxed their lending standards, which in turn fuelled property prices. This process was supported by financial innovation, in particular by securitization of mortgages in mortgage backed securities, which allowed mortgage lenders to sell the loans and get them off their balance sheets. This has been called the originate and distribute model of banking.

The debt-driven consumption boom resulted in huge current account deficits (of USA, but also of Ireland and Spain). Contrary to how economics textbooks have it, these did not lead to a depreciation of the currency, but to huge capital inflows. The origin of these capital inflows were China (and other South East Asian countries such as Korea), Germany and Japan, which had substantial current account surpluses. For the South East Asian countries this was part of an economic strategy to increase their foreign exchange reserves after they had experienced their vulnerability to capital flow reversals (and insufficient reserves) in the Asian financial crisis 1997/98. In Germany it was part of policy of wage moderation that aimed at improving competitiveness.

As is well known, capital inflows (while often praised by the proponents of financial liberalization) are hard to digest for the domestic economy and capital inflow bonanzas usually lead to a short-lived boom that ends in economic crisis (Reinhart and Reinhart 2008). While the present crisis in the USA did not originate from a capital flow reversal and currency crisis (as in the developing countries), it did experience a bubble in real estate and financial assets (much like the developing countries) and a consequent bust.

## **Conclusion: income distribution and the underlying causes of the present crisis**

The polarization of income distribution is closely linked to the international imbalances that underlie the present crisis. The median working class household has experienced stagnant wages in most developed countries. Certainly consumption norms (as spread through mass media) have increased faster than median wages (Cynamon and Fazzari 2009). Combined with a weak investment performance this has led to shortfall of private demand. Effectively (but not necessarily by intention) two different strategies have emerged: In Anglo-Saxon countries the shortfall of disposable income has been compensated by credit and increasing debt levels. The property boom allowed households to take out loans that they could not afford given their income, but that seemed reasonable to banks which assumed that property prices would continue to increase. These countries developed a credit-financed consumption boom that came with current account deficits. The resulting capital inflows again fuelled the property bubble and bubbles in other financial markets.

In the second group of countries median working class household faced a similar stagnation in wages. In these countries private consumption expenditures remained weak. Here net exports played the key components of demand growth. Thus these countries developed an export-led growth model.

The same phenomenon, stagnation in real wages, had different effects in different countries. Moreover, the two growth models rely on each other: the credit-driven consumption model implies current account deficits and thus will only work, if there are surplus countries. Inversely, the export-growth strategy will only work, if there are deficit countries that absorb their exports. The current account imbalances were made possible by financial globalization and the liberalization of capital flows.

This analysis has important policy implications. As wage moderation has been one of the structural causes underlying the present crisis, one condition for re-establishing a viable growth regime, is a change in wage policy. Wages have to increase at least with productivity growth. This would stabilize domestic demand in the surplus countries and allow to avoid a collapse of consumption demand in the deficit countries. A more egalitarian income

distribution is not luxury that can be dealt with once the economy has been stabilized, it is an integral art of a sound macroeconomic structure.

## References

- Aglietta M. (1979). *A Theory of Capitalist Regulation. The US Experience*. London: Verso
- Aglietta M., Reberioux, A. (2005). *Corporate governance adrift. A critique of shareholder value*. Cheltenham: Edward Elgar
- Arrighi, G. (1994) *The Long Twentieth Century*. London: Verso
- Becker, Joachim (2002). *Akkumulation, Regulation Territorium. Zur kritischen Rekonstruktion der französischen Regulationstheorie*. Marburg: Metropolis Verlag
- Becker, J, Blaas, W. (2007). Introduction. In: W. Blaas and J. Becker (eds): *Strategic Arena Switching in International Trade Negotiations*. Aldershot: Ashgate
- Bieler, A. (2003) *European integration and eastward enlargement: the widening and deepening of neo-liberal restructuring in Europe*. Queen's Papers on Europeanisation No 8/2003
- Boone, L, Giorno, C, Richardson, P, (1998) *Stock market fluctuations and consumption behaviour: some recent evidence*. OECD Economics department working papers No. 208
- Bowles, S, Gordon, D, Weisskopf, T, (1983) *Beyond the Waste Land. A Democratic Alternative to Economic Decline* (Garden City, NY: Anchor Press)
- Boyer, R. (1990) *The regulation school: a critical introduction*. New York: Columbia University Press
- Boyer, R. (2000) *Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis*. *Economy and Society* 29 (1), 111-145
- Brenner, R. (2003) *The boom and the bubble*. London: Verso
- Carruth, A, Dicerson, A, Henley, A, (2000) *What do we know about investment under uncertainty?* *Journal of Economic Surveys* 24, 2: 119-153
- Case, K, Shiller, R, Quigley, J, (2001) *Comparing Wealth Effects: The Stock Market Versus the Housing Market*. NBER Working Paper No.w8606 November 2001
- Catte, P, Girouard, N, Price R, André, C, (2004) *Housing markets, wealth and the business cycle*. OECD Economics Working Paper 394
- Claessens, S, Kose, M, Terrones, M, 2008. *What happens during recessions, crunches and busts?* IMF Working paper WP/08/274
- Crotty, J. (2003) *The Neoliberal Paradox: the impact of destructive product market competition and impatient financial markets on nonfinancial corporations in the Neoliberal Era*. *Review of Radical Political Economics* 35 (3): 271-79
- Crotty, J. (2005) *The Neoliberal Paradox: the impact of destructive product market competition and 'modern' financial markets on nonfinancial corporation performance in the Neoliberal Era*. In: G. Epstein (ed): *Financialization and the World Economy*. Cheltenham: Edward Elgar
- Crotty, J. (2007) *If financial market competition is so intense, why are financial firms' profits so high? Reflections on the current 'Golden Age' of finance*. Paper presented at the IWGF Inaugural conference *Financialization in Retrospect and Prospect*, London, Feb. 2007.
- Cynamon, B, Fazzari, S, 2009. *Household debt in the consumer age: source of growth – risk of collapse*. *Capitalism and Society*: forthcoming
- Dannreuther, C, Petit, P, (2006) *Post-Fordism, beyond national models: the main challenges for Regulation Theory*. *Competition and Change* 10, 2: 100-112
- DiMartino, D, Duca, J. 2007. *The rise and fall of subprime mortgages*. *Economic Letter* 2, 11 (Nov 2007)
- Duménil, G, and D. Lévy, (2001) *Costs and benefits of Neoliberalism: a class analysis*. *Review of International Political Economy* 8 (4), 578-607
- Duménil, G., Lévy, D., 2004. *Capital Resurgent. Roots of the Neoliberal Revolution*. Cambridge, MA: Harvard University Press
- ECB (2007) *Financial stability review 2007 December*. Frankfurt: ECB.
- Eichengreen and Bordo 2003. *Crises now and then: what lessons for the last era of financial globalization?* In: P. Mizen (ed): *Monetary history, exchange rates and financial markets*. Essays in honour of Charles Goodhart, Volume two. Cheltenham: Edward Elgar

- Epstein, G, Jayadev, A, (2005) The rise of rentier incomes in OECD countries: financialization, Central Bank policy and labor solidarity In: G. Epstein (ed): Financialization and the World Economy. Cheltenham: Edward Elgar
- Epstein, G, Power, D, (2003) Rentier income and financial crisis. An empirical examination of trends and cycles in some OECD countries. PERI Working Paper 57
- Gerardi, K, Lehnert, A, Sherlund, S, Willen, P, 2008. Making Sense of the Subprime Crisis. Brookings Papers on Economic Activity: Spring 2008
- Girouard, N, Kennedy M, André, C, (2006) Has the rise in debt made households more vulnerable? OECD Economics Working Paper 535 (ECO/WKP(2006)63)
- Gordon D M, Edwards R, Reich M, (1982) Segmented Work, Divided Workers. The Historical Transformation of Labour in the United States (Cambridge: CUP)
- Harvey, David, 2006. A short history of neoliberalism. Oxford: Oxford University Press
- Hein, E, Vogel, L, (2007) Distribution and growth reconsidered – empirical results for Austria, France, Germany, the Netherlands, the UK and the USA. IMK working paper 3/2007
- Hein, E. and van Treeck, T. (2007) 'Financialization' in Kaleckian/post-Kaleckian models of growth and distribution and growth.. IMK Working Paper 7/2007
- IMF (2006) How do financial systems affect economic cycles? Chapter 4 in: World Economic Outlook 2006 No. 2, Washington DC: IMF
- IMF (2007) Global prospects and policies. Chapter 1 of: World Economic Outlook 2007 No. 2, Washington DC: IMF
- IMF 2002. Recessions and recoveries. Chapter 3 of World Economic Outlook 2002/1
- IMF 2007. The changing dynamics of the global business cycle. Chapter 5 of: World Economic Outlook 2007/2
- IMF 2008. Global Financial Stability Report October 2008
- Krippner, G. (2005) The financialization of the American economy. Socio-Economic Review 3: 173-208
- Langley, P. (2007) Financialization and the consumer credit boom. Paper presented at the IWGF Inaugural conference Financialization in Retrospect and Prospect, London, Feb. 2007.
- Lazonick, W, O'Sullivan, M, 2000) Maximising shareholder value: a new ideology for corporate governance. Economy and Society 29 (1): 13-35
- Lipietz A. (1985) The Enchanted Word. London: Verso
- McDonough, T, Nardone, E. (2006) Social structures of accumulation, the regulation approach and the European Union. Competition and Change 10 (2): 200-212
- Naastepad, R, Storm, S (2006/07), OECD demand regimes (1960-2000), Journal of Post-Keynesian Economics 29 (2): 213-248
- OECD (2007) Corporate saving and investment: recent trends and prospects. OECD Economic Outlook No. 82 Preliminary Version 2007, 2, pp.358-381
- OECD 2008. Growing unequal? Income distribution and poverty in OECD countries. Paris: OECD
- Onaran, Ö. (2009) Wage share, globalization, and crisis: The case of manufacturing industry in Korea, Mexico, and Turkey, International Review of Applied Economics, 2009 March 23(2): 113-134
- Onaran, Ö. (2006) Speculation-led growth and fragility in Turkey: Does EU make a difference or "can it happen again"?, Vienna University of Economics & Business Administration, Department of Economics Working Paper Series: No: 93.
- Onaran, Ö, Stockhammer, E, Grafl, L, 2009. The finance-dominated growth regime, distribution, and aggregate demand in the US. Vienna University of Economics & B.A. Dept. of Economics Working Paper No. 126
- Petit, P. (1999) Structural forms and growth regimes in the Post-Fordist era. Review of Social Economy 57 (2): 220-243
- Power, D, Epstein, G, Abrena, M, (2003) Individual country Technical notes for: Trends in the rentier income share in OECD countries 1960-2000. PERI Working Paper 58b
- Power, D, Epstein, G, Abrena, M, (2003) Trends in the rentier income share in OECD countries 1960-2000. PERI Working Paper 58a
- Reinhart, C, Reinhart, V, 2008. Capital Flow Bonanzas: An Encompassing View of the Past and Present. NBER Working Paper No. W14321
- Schaberg, M. (1999) Globalization and the Erosion of National Financial Systems. is Declining Autonomy Inevitable? Cheltenham, UK: Edward Elgar
- Skott, P, Ryoo, S. (2007) Macroeconomic implications of financialization. Univ. of Massachusetts Amherst Dept. of Economics Working Paper 2007-08

- Stockhammer E. (2004) Financialization and the slowdown of accumulation. *Cambridge Journal of Economics*. 28 (5), 719-41
- Stockhammer, E, Onaran, Ö and Ederer, S. (2009) Functional income distribution and aggregate demand in the Euro area. *Cambridge Journal of Economics* 33 (1): 139-159
- Stockhammer, E. (2004) *The rise of unemployment in Europe: a Keynesian approach*. Cheltenham, UK: Edward Elgar
- Stockhammer, E. (2005) Shareholder value-orientation and the investment-profit puzzle. *Journal of Post Keynesian Economics* 28 (2): 193-216
- Stockhammer, Engelbert, 2008. Stylized facts on the finance-dominated accumulation regime. *Competition and Change* 12, 2: 189-207
- Stockhammer, E. and Grafl, L. 2008. Financial uncertainty and business investment. Vienna University of Economics & B.A. Dept. of Economics Working Paper No. 123
- van Apeldoorn, B. (1999) Transnationalization and the restructuring of Europe's socioeconomic order. *International Journal of Political Economy* 28 (1): 12-53

Table 1

**Table 1.1 Household debt as percent of disposable income**

	1995	2000	2005
Belgium			
Denmark	188	236	260
Germany	97	111	107
Greece			
Spain	59	83	107
France	66	78	89
Ireland		81	141
Italy	32	46	59
Luxembourg			
Netherlands	113	175	246
Austria			
Portugal			
Finland	64	66	89
Sweden	90	107	134
United Kingdom	106	118	159
<i>EU uwa</i>	<i>91</i>	<i>110</i>	<i>139</i>
United States	93	107	135
Japan	113	136	132

Note: Data for Denmark, Spain and Japan refer to 2004 rather than 2005.

Source: Girourard et. al. (2006)

**Table 1.2 Private consumption expenditures as percent of disposable income**

	1970s	1980s	1990s	2000s
	0.63	0.67	0.63	0.63
	0.63	0.65	0.62	0.59
	0.64	0.66	0.69	0.70
	0.63	0.70	0.75	0.74
	0.72	0.73	0.70	0.70
	0.63	0.66	0.65	0.66
	0.73	0.75	0.68	0.62
	0.67	0.68	0.69	0.70
	0.64	0.59	0.55	0.53
	0.59	0.60	0.59	0.58
	0.66	0.68	0.68	0.67
	0.79	0.75	0.74	0.78
	0.64	0.65	0.66	0.61
	0.56	0.57	0.59	0.56
	0.69	0.71	0.73	0.72
<i>EU uwa</i>	<i>0.66</i>	<i>0.67</i>	<i>0.66</i>	<i>0.65</i>
United States	0.70	0.73	0.76	0.80
Japan	0.61	0.64	0.67	0.71

Note: Germany refers to West-Germany before 1991.

Source: AMECO

Table 2

<b>Investment as % of operating surplus</b>				
	1970s	1980s	1990s	2000s
Austria	59%	50%	47%	44%
Belgium				
Denmark	46%	47%	46%	49%
Finland	57%	57%	41%	36%
France	46%	46%	42%	43%
Germany	52%	48%	42%	35%
Greece	24%	24%	26%	36%
Ireland	50%	44%	30%	28%
Italy	41%	36%	31%	33%
Luxembourg	39%	48%	51%	50%
Netherlands	48%	39%	38%	38%
Portugal	37%	35%	31%	34%
Spain	47%	40%	44%	47%
Sweden	59%	52%	46%	51%
United Kingdom	55%	48%	44%	42%
<i>EU uwa</i>	47%	44%	40%	40%
USA	46%	44%	39%	39%
Japan	58%	59%	61%	56%

Note: Investment is private gross fixed capital formation. EU is an unweighted average of available EU countries

Source: OECD National accounts

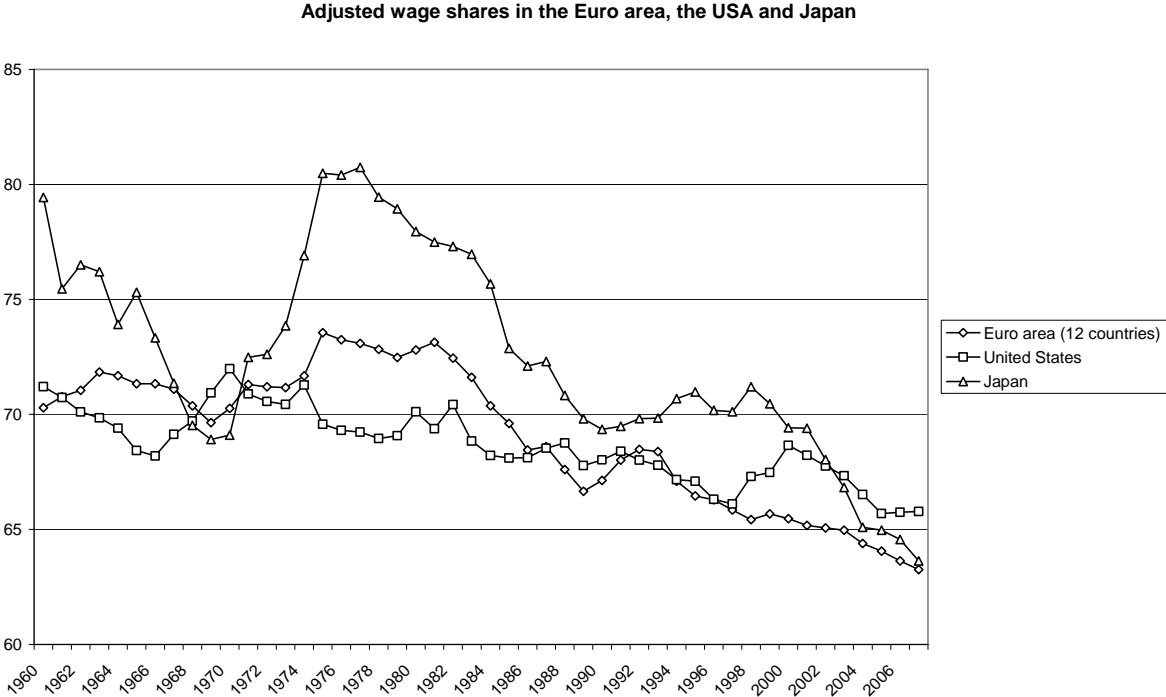


Table 3. Current transactions surpluses and deficits as % of GDP in 2007

	2007
Germany	7.6%
Ireland	-5.4%
Spain	-10.1%
United Kingdom	-3.8%
USA	-5.2%
Japan	4.8%

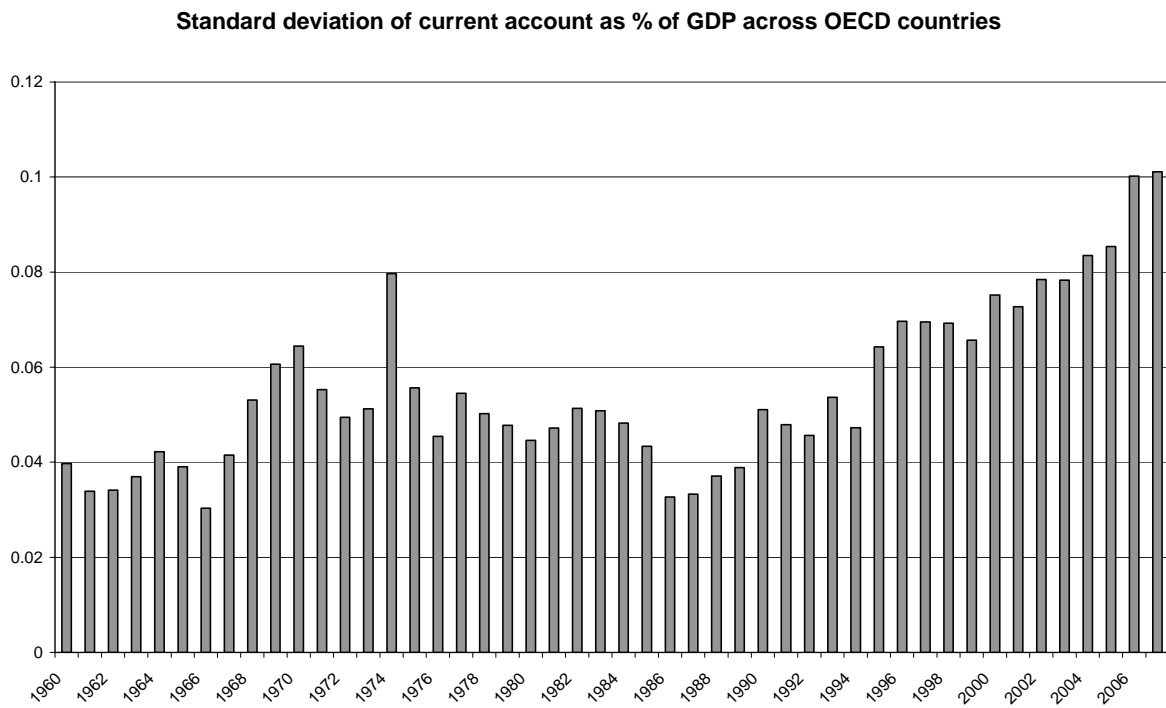
Source: AMECO

Figure 1



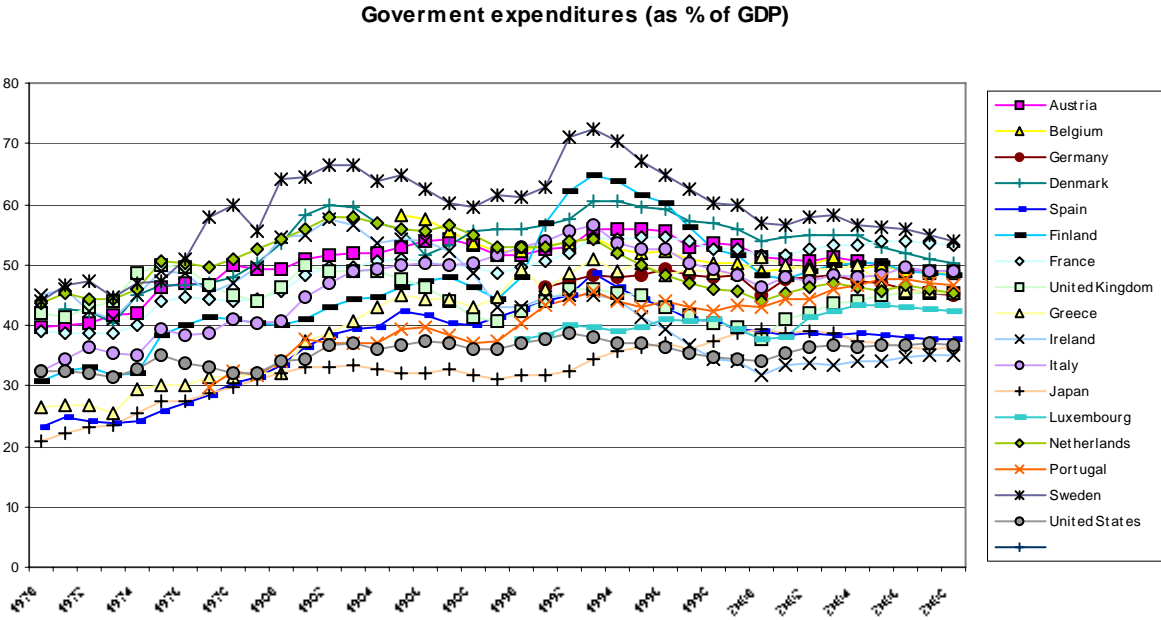
Source: AMECO

Figure 2. Standard deviation of the current account as % of GDP across OECD countries



Source: AMECO

Figure 3. Government expenditures as percent of GDP



Note: Government total disbursements, OECD Economic Outlook dataset

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- Eigl R., Experimentielle Methoden in der Mikroökonomik, No. 1, Mai 1991.
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- Andraea C.A., Eigl R., Der öffentliche Sektor aus ordnungspolitischer Sicht, No. 3, Oktober 1991.
- Dockner E., A Dynamic Theory of Conjectural Variations, No. 4, Oktober 1991.
- Feichtinger G., Dockner E., Cyclical Consumption Pattern and Rational Addictions, No. 5, Oktober 1991.
- Marterbauer M., Die Rolle der Fiskalpolitik im Schwedischen Wohlfahrtsstaat, No. 6, Dezember 1991.
- Pichler E., Cost-Sharing of General and Specific Training with Depreciation of Human Capital, No. 7, Dezember 1991.
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- Pichler E., Costs of Negotiations and the Structure of Bargaining - a Note, No. 9, Dezember 1991.
- Nowotny E., The Austrian Social Partnership and Democracy, No. 10, Dezember 1991.
- Pichler E., Walther H., The Economics of Sabbath, No. 11, April 1992.
- Klatzer E., Unger B., Will Internationalization Lead to a Convergence of National Economic Policies?, No. 12, June 1992.
- Bellak C., Towards a Flexible Concept of Competitiveness, No. 13, May 1992.
- Koren St., Stiasny A., The Temporal Causality between Government Taxes and Spending, No. 14, August 1992.
- Altzinger W., Ost-West-Migration ohne Steuerungsmöglichkeiten?, No. 15, September 1992.
- Bellak Ch., Outsiders' Response to Europe 1992, Case of Austria, No. 16, December 1992.
- Guger A., Marterbauer M., Europäische Währungsunion und Konsequenzen für die Kollektiv-vertragspolitik, No. 17, January 1993.
- Unger B., van Waarden F., Characteristics, Governance, Performance and Future Perspectives, No. 18, January 1993.
- Scharmer F., The Validity Issue in Applied General Equilibrium Tax Models, No. 19, May 1993.
- Ragacs Ch., Minimum Wages in Austria: Estimation of Employment Functions, No. 20, June 1993.
- Ragacs Ch., Employment, Productivity, Output and Minimum Wages in Austria: A Time Series Analysis, No. 21, September 1993.
- Stiasny A., TVP - Ein Programm zur Schätzung von Modellen mit zeitvariierenden Parametern, No. 22, December 1993.
- Gstach D., Scale Efficiency: Where Data Envelopment Analysis Outperforms Stochastic Production Function Estimation, No. 23, December 1993.
- Gstach D., Comparing Structural Efficiency of Unbalanced Subsamples: A Resampling Adaptation of Data Envelopment Analysis, No. 24, December 1993.
- Klausinger H., Die Klassische Ökonomie und die Keynesianische Alternative. Revision ein Mythos?, No. 25, December 1993.
- Grandner T., Gewerkschaften in einem Cournot-Duopol. Sequentielle versus simultane Lohnverhandlungen, No. 26, April 1994.
- Stiasny A., A Note on Frequency Domain Properties of Estimated VARs, No. 27, June 1994.
- Koren St., Stiasny A., Tax and Spend or Spend and Tax ? An International Study, No. 28, August 1994.
- Gstach D., Data Envelopment Analysis in a Stochastic Setting: The right answer from the wrong model?, No. 29, August 1994.
- Cantwell J., Bellak Ch., Measuring the Importance of International Production: The Re-Estimation of Foreign Direct Investment at Current Values, No. 30, January 1995.
- Klausinger H., Pigou's Macroeconomics of Unemployment (1933). A Simple Model, No. 31, February 1995.
- Häfke Ch., Helmenstein Ch., Neural Networks in Capital Markets: An Application to Index Forecasting, No. 32, January 1995.
- Hamberger K., Katzmair H., Arithmetische Politik und ökonomische Moral, Zur Genologie der Sozialwissenschaften in England, No. 33, May 1995.
- Altzinger W., Beschäftigungseffekte des österreichischen Osthandels, No. 34, July 1995.
- Bellak Ch., Austrian Manufacturing Firms Abroad - The last 100 Years, No. 35, November 1995.
- Stiasny A., Wage Setting, Unemployment and the Phillips Curve, No. 36, January 1996.
- Zagler M., Long-Run Monetary Non-Neutrality in a Model of Endogenous Growth, No. 37, June 1996.
- Traxler F., Bohmann G., Ragacs C., Schreckeneder B., Labour Market Regulation in Austria, No. 38, January, 1996.
- Gstach D., A new approach to stochastic frontier estimation: DEA+, No. 39, August 1996.
- Bellak Ch., Clement W., Hofer R., Wettbewerbs- und Strukturpolitik: Theoretische Begründung und neuere Entwicklungen in Österreich, No. 40, June 1996.
- Nowotny E., Dritter Sektor, Öffentliche Hand und Gemeinwirtschaft, No. 41, August 1996.
- Grandner T., Is Wage-Leadership an Instrument to Coordinate Union's Wage-Policy? The Case of Imperfect Product Markets, No. 42, November 1996.

- Pirker R., The Constitution of Working Time, No. 43, Januar 1997.
- Nowotny E., Konsequenzen einer Globalisierung der Weltwirtschaft für unsere Gesellschaft, No. 44, Januar 1997.
- Grandner T., Territoriale Evolution von Kooperation in einem Gefangenendilemma, No. 45, February 1997.
- Häfke Ch., Sögner L., Asset Pricing under Asymmetric Information, No. 46, February 1997.
- Stiassny A., Die Relevanz von Effizienzlöhnen im Rahmen von Gewerkschaftsverhandlungsmodellen, No. 47, May 1997.
- Stiassny A., Unsicherheit bezüglich der Preiselastizität der Güternachfrage als reale Rigidität, No. 48, May 1997.
- Klausinger H., Die Alternativen zur Deflationspolitik Brünings im Lichte zeitgenössischer Kritik, No. 49, June 1997.
- Wehinger G.D., Exchange Rate-Based Stabilization: Pleasant Monetary Dynamics?. No. 50, August 1997.
- Wehinger G.D., Are Exchange Rate-Based Stabilizations Expansionary? Theoretical Considerations and the Brazilian Case, No. 51, August 1997.
- Huber C., Sögner L., Stern A., Selbstselektierendes Strompreisregulierungsmodell, No. 52, August 1997.
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