



Economic impact of Southern European member states exiting the eurozone

While Greece defaulting on its sovereign debt and leaving the European Monetary Union would in and of itself have a relatively minor effect on the world economy, such a move could, however, undermine investor confidence in the Portuguese, Spanish and Italian capital markets and thus provoke not only a sovereign default in those states as well, but also a severe worldwide recession. This would in turn reduce economic growth by a total of 17.2 trillion euros in the world's 42 largest economies in the lead-up to 2020. Hence it is incumbent upon the community of nations to prevent Greece from a sovereign default as well as leaving the euro, and the domino effect that this event could induce.

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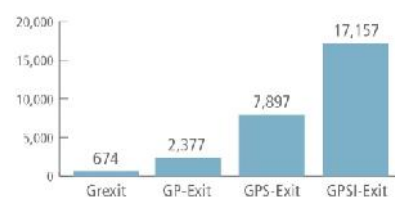
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Focus

Projected cumulative losses in real GDP in the world's 42 largest economies from 2013 to 2020, for four different scenarios

All figures are in billions of euros.



Source: Prognos AG. | BertelsmannStiftung

Legend for the scenarios:

- Grexit: Greece defaults and leaves the eurozone
- GP-Exit: Both Greece and Portugal default and leave the eurozone
- GPS-Exit: Portugal, Greece and Spain default and leave the eurozone.
- GPSI-Exit: Greece, Portugal, Spain and Italy default and leave the eurozone.

The debate concerning the eventuality that Greece, Portugal, Spain and Italy might leave the European Monetary Union has become increasingly strident since the onset of the euro crisis in September 2009. For example, in July 2012 German Minister of Economics Philipp Rösler expressed the view that the prospect of Greece leaving the European Monetary Union was no longer so daunting as it had once seemed. CSU Secretary General Alexander Dobrindt echoed this view in late August 2012, when he predicted that Greece would leave the eurozone by 2013. The European Central Bank's decision this past September to buy up government bonds of European Monetary Union member states that are facing a sovereign debt crisis somewhat eased the situation for these states. However, their budgets are still in disarray, a fact underscored by the statement by Greek Prime Minister Antonis Samaras in October 2012 to the effect that Greece will be bankrupt by the end of next month unless further infusions of foreign capital are forthcoming.

Against this backdrop, it is important to bear in mind that there is no legal mechanism for excluding European Monetary Union members from the eurozone. However, bailout money might simply dry up because the actors providing it may ultimately take the view that budget cutbacks in the eurozone member states facing budgetary crises are not progressing satisfactorily. Without bailout money from European rescue packages and the International Monetary Fund (IMF), these states would have no further revenue and would face bankruptcy. But in order for a state that finds itself in this plight to be able to pay government employees and finance pension payments and other entitlements, it would need to introduce its own currency: in other words, it would have no choice but to leave the European Monetary Union. We will now discuss the

consequences of such an event, in terms of four possible exit scenarios.

1. Design of the exit scenarios

Our projections concerning the economic consequences of the four European Monetary Union member states that are currently in dire financial straits leaving the eurozone are based on four scenarios. In the first, only Greece takes leave of the eurozone (Grexit scenario). In the second, both Greece and Portugal exit (GP-Exit scenario). The third scenario sees the departure of Spain, in addition to Greece and Portugal (GPS-Exit scenario), and in the fourth scenario the quartet of states comprising Greece, Italy, Portugal and Spain bids adieu to the euro. We opted for this eurozone exiting sequence because the current debate is largely couched in terms of states that might leave the monetary union.

We estimated the real economy-consequences entailed by these four scenarios by carrying out simulations using the Prognos macroeconomic world model called VIEW (see box). To this end, we modelled the projected real GDP of the 42 states in the VIEW model from 2013 to 2020, based on the assumption that our putative scenarios will become reality next year. The computations concerning real GDP resulting from these scenarios were compared with the economic data and forecasts in Prognos's "Weltreport 2012," which was published in mid 2012 and is predicated on the assumption that the eurozone will remain intact (baseline scenario). The forecasts presented in this report were likewise elaborated using our VIEW model. According to the report, the budget cutbacks that need to be made in the lead-up to 2016 and 2017 will be a

huge drag on worldwide economic growth (see Prognos AG 2012). Our four scenarios forecast even greater growth slowdowns.

The four simulations we carried out were based on the following assumptions: It was presumed that Greek bailouts would be suspended, causing Greece to face sovereign default and consequently introduce its own currency. No one can possibly predict how large this haircut would actually be, but our simulations are based on a scenario involving a 60 percent default rate. The remaining 40 percent of Greece's debt would continue to be denominated in euros. This haircut would affect both public and private creditors, who would be forced to take a charge on 60 percent of their loans to Greece. Table 1 displays how this might play out financially for selected states.

A Greek sovereign default would also result in correspondingly high writedowns for government budgets. As such writedowns are of an accounting nature, the budget deficits of the states to which Greece owes money either directly or indirectly would increase, thus driving up the sovereign debt and debt service of these states. This in turn would force the governments affected to consolidate elsewhere by either cutting their expenditures or raising taxes. Such measures reduce demand for goods and services, which in turn reduces economic output and increases unemployment. The VIEW model takes into account the budgetary impact of a haircut by positing writedowns of the various industrial nations' extensive loan receivables and liabilities (EFSM, EFSF and IMF bailouts; the European Central Bank buying up government bonds; target loans). The budgetary impact of sovereign

defaults cannot be taken into account for emerging economies owing to a lack of data.

Greece's public and private sector debtors would also need to write off 60 percent of their outstanding loans. According to our calculations, these losses would presumably have a direct negative wealth effect on household income for the relevant year; and this in turn would reduce housing start-ups and consumer spending.

The VIEW model is a macroeconomic model that is used to make projections and simulate economic scenarios. The simulations in our study encompassed the world's 42 states that account for more than 90 percent of the world economy and were based on the following parameters: supply and demand; labour markets; government finances; as well as exports, imports, currency rates and so on. Thus, the model also factors in the interrelationships between the various states as regards these parameters.

Sovereign default and the introduction of a national currency would of course have far reaching economic consequences also for Greece. The new Greek currency would be devalued relative to all other currencies, and the scope of this devaluation remains every bit as uncertain as the scope of a haircut. Our VIEW model simulations are predicated on a 50 percent devaluation of the Greek currency. This devaluation would drive up the government-debt ratio as expressed in the new Greek currency, because this debt would have previously been denominated in euros. Hence introduction of a national currency would reduce Greece's government debt ratio by a mere 20 percent; and what's worse, capital-market confidence in Greece's creditworthiness would evaporate. Hence the Greek government's sole source of revenue would be tax revenue, which in turn means that the Greek budget balance would be virtually zero in the lead-up to 2020. A Greek sovereign default and

Greece switching to a new currency would also put a major dent in consumer and investor confidence, which our simulations (based on past examples such as Argentina in 2001) show would translate into a ten percent decline in 2013 and a five percent decline in 2014, for both parameters. Moreover, the aforementioned declines in demand for goods and services would not be limited to the state affected. In a world where individual state economies maintain highly symbiotic relationships with each other through foreign trade, falls in consumer demand in one state would soon spread to its trading partners. The result would be a worldwide decline in economic activity.

The other three scenarios were simulated based on the same assumption of a 60 percent haircut and a 50 percent devaluation of the new currency relative to all other currencies.

that form the basis for our simulations currently represent the closest approximation of the reality that would actually unfold.

Using these assumptions as basis, the impact of the four scenarios on the world economy was simulated for the period extending from 2013 to 2020. In the interest of modelling the impact of each of the four scenarios on economic growth, annual declines in GDP were computed in comparison to the projections in Prognos's "Weltreport 2012" and were then tallied for the years 2013 to 2020. The projected cumulative declines in economic growth thus obtained are displayed in table 2 for all four scenarios.

Table 1: Public and private sector loan writedowns for the four scenarios, predicated on a 60 percent default on both public and private sector loans for a state leaving the European Monetary Union (figures in billions of euros).

State	Grexit	GP-Exit	GPS-Exit	GPSI-Exit
Germany	64.0	99.1	266.1	455.2
France	54.9	81.6	211.8	457.7
Great Britain	2.3	13.1	52.5	78.3
The Netherlands	12.3	19.2	71.6	115.1
USA	6.3	10.5	29.6	47.8

Source: Prognos AG.

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2. Ramifications of the eurozone exit scenarios for the world economy

The VIEW model simulations discussed in this section shed light on the likely economic effects of the four eurozone exit scenarios for the 42 states encompassed by the model. Like all simulations, the results we obtained were strongly influenced by the assumptions on which they were based, and in this case above all by the actual scope of the haircuts and the currency devaluations that would come into play. In our view, the assumptions

Grexit scenario: A sovereign default on the part of Greece and its consequent exit from the European Monetary Union would, in and of itself, have only a minor impact on economic growth in Europe and the rest of the world. The aggregate GDP decline for 2013 to 2020 in the 42 VIEW states, which account for more than 90 percent of worldwide output, would amount to 674 billion euros. The decline in Greece's GDP would be the single largest chunk in this regard (164 billion euros). The cumulative decline in growth in Germany would amount to only 73 billion euros. In the interest of putting these GDP declines into perspective for each of the various states, the cumulative decline in economic growth was compared to GDP for 2013. Greece's cumulative GDP decline would amount to 94 percent for 2013, compared to only 2.9 and 0.9 percent for Germany and the US respectively. The economies of France, Portugal, and Bulgaria would be relatively hard hit, by virtue of a cumulative GDP decline amounting to around 8 percent.

GP-Exit scenario: The economic impact of both Greece and Portugal leaving the European Monetary Union would be palpable, but still relatively minor. In this

Table 2: Cumulative declines in real, non-discounted GDP for 2013 to 2020 for the four scenarios, compared in each case to the baseline scenario from "Weltreport 2012."

State	Grexit	GP-Exit	GPS-Exit	GPSI-Exit
Argentina	-3	-9	-34	-65
Australia	5	19	61	138
Belgium	0	-5	-28	-70
Brazil	-10	-35	-113	-233
Bulgaria	-2	-3	-8	-17
Chile	-7	-9	-33	-69
China	-81	-275	-924	-1,922
Denmark	1	-2	-11	-22
Germany	-73	-225	-850	-1,707
Estonia	0	-1	-2	-4
Finland	-2	-8	-27	-55
France	-157	-331	-1,225	-2,913
Greece	-164	-164	-168	-174
Great Britain	-6	-89	-419	-738
India	-22	-82	-265	-558
Ireland	-3	-12	-51	-93
Israel	-2	-7	-22	-47
Italy	6	-9	-79	-1,047
Japan	-8	-74	-345	-857
Canada	-8	-37	-123	-274
Latvia	0	0	-1	-3
Lithuania	0	-1	-3	-6
Mexico	-10	-34	-109	-227
New Zealand	-1	-3	-9	-20
The Netherlands	-10	-32	-201	-344
Norway	1	-5	-21	-48
Austria	-5	-17	-61	-197
Poland	-3	-12	-42	-91
Portugal	-12	-84	-159	-179
Romania	-1	-3	-11	-31
Russia	5	-23	-104	-294
Sweden	-3	-12	-41	-85
Switzerland	-3	-15	-90	-240
Slovakia	-1	-2	-9	-19
Slovenia	0	-1	-4	-26
Spain	16	-301	-755	-973
South Africa	-1	-5	-19	-40
South-Korea	-5	-34	-124	-284
Czech Republic	-1	-5	-18	-39
Turkey	-7	-24	-76	-161
Hungary	-1	-3	-9	-23
US	-93	-365	-1,244	-2,825
Eurozone 14*	-403	-1,190	-3,605	-7,755
EU-24*	-419	-1,320	-4,168	-8,811
Industrial nations	-541	-1,874	-6,198	-13,542
Emerging economies	-133	-503	-1,699	-3,615
All states **	-674	-2,377	-7,897	-17,157

* Malta, Cyprus and Luxembourg are not included in the VIEW model owing to a lack of data.
 ** The 42 states in the VIEW model account for more than 90 percent of world economic output.

scenario, the cumulative GDP decline in the 42 VIEW states would amount to nearly 2.4 trillion euros, with Portugal accounting for 84 billion of this amount alone. In Germany, the 225 billion euro decline in GDP under the GP-Exit scenario would wreak substantial economic damage. The 365 billion decline in GDP would be even greater in the US (in absolute terms) than in Europe, while the figures for France and China would be 331 and 275 billion euros respectively. However, these figures are put into perspective when compared to the declines in GDP for 2013. The cumulative GDP declines in the US and Germany would amount to 3.3 and 9.1 percent of 2013 GDP respectively, while the figure for France would be appreciably higher (17.6 percent). But by comparison, the 55 percent decline in Portugal would be far more severe. The figure for Greece is only slightly higher than for the Grexit scenario and would remain at around 94 percent.

GPS-Exit scenario: Greece, Portugal and Spain leaving the European Monetary Union would provoke palpable GDP declines worldwide. The cumulative decline in France's GDP in the lead-up to 2020 would amount to more than 1.2 trillion euros, and in Germany to more than 850 billion euros. The cumulative GDP declines for the four BRIC states would amount to 1.4 trillion euros, and for the US to more than 1.2 trillion euros. The total economic losses in the 42 VIEW states would amount to nearly 7.9 trillion euros. In the GPS-Exit scenario, cumulative GDP losses for 2013 would be considerable, particularly in Portugal (due to the fact that France is a major trading partner) and France (due to, among other things, the extensive loans French banks have made to Spain). In this scenario, Portugal's GDP would decrease by 104 percent relative to 2013, followed by Greece (96 percent), Spain (81 percent), France (65 percent),

Germany (34 percent), China (24 percent) and the US (11 percent).

GPSI-Exit scenario: The departure of Greece, Italy, Portugal and Spain from the European Monetary Union would provoke a worldwide recession that would translate into a GDP decline amounting to nearly 17.2 trillion euros in the 42 VIEW states in the lead-up to 2020. In terms of absolute figures, the declines would be the greatest in France (2.9 trillion euros), the US (2.8 trillion euros), China (1.9 trillion euros), and Germany (around 1.7 trillion euros). France would be particularly hard hit by Italy's sovereign default and exit from the euro, on account of the extensive loans French banks have made to Italy. The cumulative GDP decline would amount to 154 percent of economic output for 2013, with Italy alone registering a cumulative GDP loss of around 75 percent of GDP for 2013. The counterpart figures for Germany, the US and China would be 69, 25 and 49 percent respectively.

A decline in real GDP of this magnitude would also drive up unemployment. For example, in the GPSI-Exit scenario Germany's unemployment rate in 2015 and 2016 would be 2.5 and 2.2 percent higher, respectively, relative to the baseline scenario. In the ensuing 2017 to 2020 period, Germany's unemployment rate would range from 0.5 to 1.7 percent higher than the baseline scenario.

3. Economic policy consequences

While Greece defaulting on its sovereign debt and leaving the European Monetary Union would in and of itself have a relatively minor effect on the world economy, the consequences of this event are to all intents and purpose shrouded in mystery.

One possible consequence, however, is that Greece leaving the European Monetary Union would send a robust and lasting signal to Italy, Portugal and Spain that the gravy train of bailouts is bound to end unless these states make enormous efforts to get their financial houses in order. This in turn might potentially reduce opposition to tough but necessary reforms, and thus help resolve the euro crisis. But on the other hand, a Greek sovereign default could lead to capital market speculation and other untoward responses that would provoke sovereign default on the part of Portugal, Spain and ultimately Italy. And this in turn would send the world economy into a deep recession that would affect not only Europe, but the rest of the world as well. Apart from the severe economic consequences of such a recession, it would also put major strains on the social fabric and political stability of a number of states, particularly those that leave the European Monetary Union; but other states would feel these strains as well. Hence there is a definite possibility that Greece leaving the European Monetary Union would provoke a domino effect that would translate into a lengthy worldwide recession.

Policy Brief 2012/04: A Modern Social Market Economy

The new MSME Index defines and measures the features of a Modern Social Market Economy in international comparison. In contrast to other indices that measure economic performance, the MSME Index takes an institutional approach, outlining a system of essential institutions and measurable indicators for the construction and assessment of modern social market economies. Among other insights, the index could guide the European Union toward achieving the “highly competitive social market economy” that it defines in the Lisbon Treaty as its desired economic order.

Policy Brief 2012/05: Maastricht 2.0

The European Union’s regulations governing sovereign debt are based on the principle of equal treatment of all member states. The recommendations we make here concerning changes in EU sovereign-debt reduction rules take account of national particularities. According to our calculations, such reformed regulations would do far more to promote economic growth than would be the case under the Fiscal Compact’s European debt brake. By 2030, real gains in growth will amount to more than 450 billion euros.

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