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GERMANY

Selected Issues

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Approved by the European Department

February 1, 2008

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I. The Modest Effect of the German VAT Hike: The Role of Inflation Smoothing[1]

A. Introduction

1. **Germany's 3 percentage point increase in the value-added tax (VAT) rate in January 2007 was one of the largest such hikes in industrial countries.** The size of the increase and the long announcement period—about 13 months—had created uncertainty about its projected impact on inflation. The higher rate came in the context of a nascent economic recovery, rapid gains in employment, and rising oil prices. These created the risk that inflationary effects could be large.

2. **Price increases in 2007 attributable to the VAT rate hike turned out to be more modest than feared**. Some observers remain concerned that the inflationary effects have only been delayed. We argue to the contrary. The effects of the VAT rate increase are largely complete because inflation rose significantly during 2006 in anticipation of the VAT hike. We call this "inflation smoothing". Consumers brought forward their purchases to avoid the higher expected prices in 2007, and producers increased their prices incrementally to take advantage of the greater demand. This was especially the case for durable goods. Because of this anticipatory behavior, prices rose gradually, and the inflationary effects in 2007 after January did not exist. Overall, we find that the pass-through of higher VAT rates to consumers was rather limited due to competitive pressures in the retail sector. Producers were able to take some advantage where demand was captive.

3. **The paper is structured as follow**. Section B discusses inflation and demand developments around the time of the VAT hike and outlines the plan of our empirical analysis. Section C calculates the rise in core inflation due to the VAT increase, identifying the timing of the increase and the products that experienced higher-than-average price increases. Section D concludes.

B. Stylized Facts and Rationale for Inflation Smoothing

4. **There was considerable uncertainty about the exact impact of the VAT hike on inflation in the run-up phase**. A full and immediate pass-through of the VAT rate increase would have implied a 2.6 percentage point jump in prices of the affected items. With three-fifths of the items in the consumer price index (CPI) basket affected (the VAT items), the full impact on the consumer price index would have been 1.4 percentage points (Bundesbank, 2006). Not all producers were expected to pass on the VAT increase fully to consumers, so that the actual effect was projected to be smaller (Royal Bank of Scotland, 2006).

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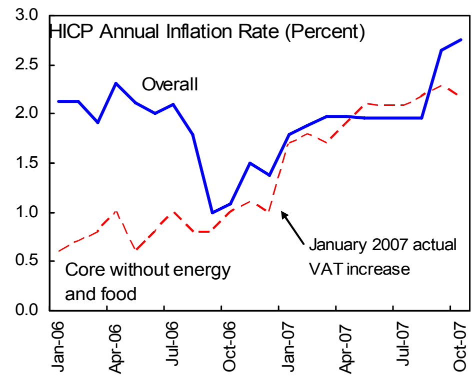
[1] Prepared by Alina Carare and Stephan Danninger.

5. **Ex post, the following developments transpired:**

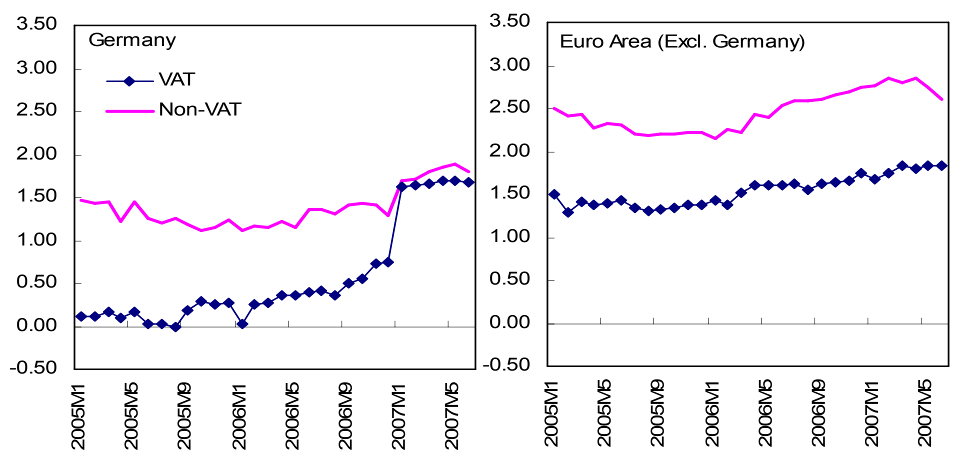
- Core inflation rose steadily in 2006 and then jumped in January 2007. Throughout 2007, a further rise was due to administrative increases in education costs. Importantly, in the second half of 2007, core inflation declined significantly, pointing to a dying out of the base effect from 2006. The increase in headline inflation in September 2007 was due to a rise in oil and food prices worldwide.



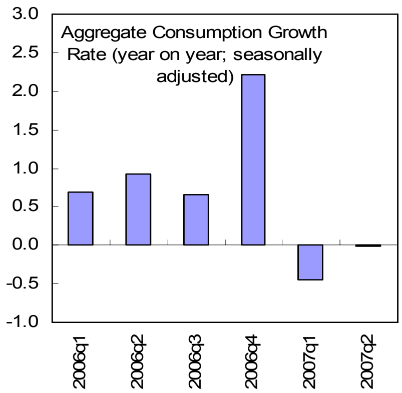
- The decline in the output gap and rise in employment apparently did not have a significant influence on inflation. Output growth accelerated in 2006, more than in the euro area, due to domestic investment and net export increases. In addition, the World Cup gave another boost to service sector demand. Output growth remained above potential in the first three quarters of 2007.

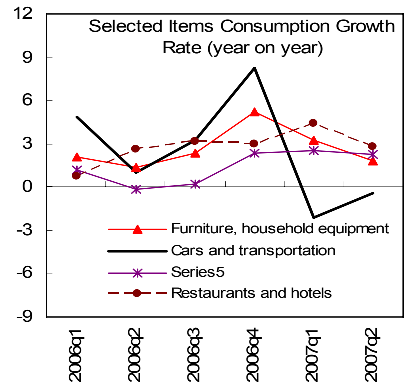
- Importantly, German prices in 2006 rose more rapidly than in the euro area and especially for VAT items. This suggests that increases in 2006 core German inflation were mainly due to the VAT rate increase rather than to general demand pressures.

Price Increase Comparison: Germany and Euro Area (excl. Germany)
Inflation of VAT and Non-VAT Core Items
(Percent; excluding tobbaco, energy, fruit, vegetables, education, and package holidays)



- German households engaged in intertemporal consumption shifting in anticipation of the VAT hike. Consumption increased 2.2 percent in the last quarter of 2006. This increase was concentrated in December and was more pronounced for cars and other durables than for other goods and services. Consumption contracted by 0.5 percent in the first quarter of 2007 (both figures in annualized terms).





6. **Thus, it is our hypothesis that incentives for consumption shifting and the long announcement period generated advance price increases in 2006.** Firms are continuously updating their information set regarding aggregate demand conditions and competitors' prices. Since not all firms adjust their prices every period, because absorbing prices is costly, price adjustments are staggered, and aggregate inflation will rise only slowly in advance of the VAT implementation (Mankiw and Reis, 2002). Such advance price increases are likely to be larger in an environment of low competition (Carbonnier, 2007). Prices can nevertheless be expected to rise on the date of implementation, when advance purchases are not significant and producers cannot pass on prices to consumers.

C. Empirical Analysis

7. **We estimate monthly increases in prices controlling for a variety of factors.** A key control variable is the relative price increases in VAT versus non-VAT items in the euro area. This variable proxies for common trends, shocks, and general demand pressures. To assess the timing of the VAT increase, we use dummy variables for the announcement, implementation, and post implementation periods. We also use monthly dummies to account for seasonality, and distinguish between durables and nondurables and between items sold in competitive markets versus those where producers possibly have some market power. Details with regard to data, method, and specification are reported in the Appendix.

8. **The following variables are used in the analysis:**

- *VAT* is a dummy variable taking the value of one for VAT items and zero otherwise. Table I-1 shows a negative sign on this variable indicating that, after other secular shifts have been controlled for in the VAT, the average inflation rate for VAT items was lower than that of non-VAT items for our full sample period.

- The variable *VAT 06 trend* begins by taking a value of one for VAT items in January 2006, and then increases monthly by one until December 2006. It is positive and significant. This variable picks up the anticipatory effect of the VAT, thereby generating a gradual increase in inflation in VAT items.
- *VAT 07* takes the value of one for VAT items in January 2007 only—the month in which the rate increases came into force—and it is positive and significant, as expected.
- We also experimented with the variable *VAT 07 trend,* similar to the other time trend above. It has a value of one for VAT items during January 2007 and increases monthly by one until June 2007. It is not significant, and very small; hence, it is not presented below. The implication is that, unlike in 2006 when the VAT items increased steadily increase relative to non-VAT items, no such effect was observed in 2007.
- *Durable 06* picks up the effect of the VAT increase on durables. It takes a value of one for VAT items that are also durable goods. It is positive, significant, and of a sizable value, indicating that the anticipatory inflation in 2006 increased primarily in durable VAT items. However, this was not a gradual increase since *Durable 06 trend,* which takes a value of one for VAT ***and*** durable items in January 2006, and increases monthly afterward, was not significant.
- *Imperfect competition* picks up the rent extraction effect. It takes a value of one in 2006 for certain items.[2] It is positive, implying some rent extraction, but not significant.

[2] This dummy takes a value of one for the items where the rate of the inflation increase between December 2001 and January 2002 was more than the median price increase. This transition period was associated with the conversion to the euro. A currency conversion should not lead to a change in prices, because, as Hoffman and Kurz-Kim (2006) note, these prices were not changed because these prices were not changed because otherwise prices were costly to change (the menu-cost hypothesis). Therefore, we surmise that large positive increases during that period signal price setting power.

Table I-1. Determinants of German Core Inflation: Inflation Smoothing, Competitiveness, and Durability

Dependent variable: HICP-weighted inflation rate of 45 two-digit items of the index; sample January 2005 - June 2007

	(1)	(2)	(3)	(4)	(5)
Constant	0.003	0.003	0.003	0.003	0.002
	(0.41)	(0.42)	(0.40)	(0.44)	(0.34)
Euro area 1/	0.447	0.450	0.449	0.448	0.452
	(15.31)**	(15.42)**	(15.29)**	(15.30)**	(15.45)**
Dummies					
VAT	-0.020	-0.020	-0.021	-0.020	-0.020
	(2.50)*	(2.52)*	(2.51)*	(2.41)*	(2.51)*
VAT 06 trend	0.002	0.001	0.001	0.001	0.001
	(2.20)*	(3.54)**	(3.71)**	(3.73)**	(3.26)**
VAT 07	0.034	0.032	0.031	0.033	0.032
	(10.35)**	(9.78)**	(9.64)**	(10.34)**	(9.79)**
Durable 06		0.009	0.012		0.010
		(2.71)**	(2.91)**		(2.78)**
Durable 06 trend			-0.001		
			(1.14)		
Imperfect competition				0.003	0.003
				(1.27)	(1.41)
Estimation 2/	FE	RE	RE	RE	RE
Monthly dummies	Y	Y	Y	Y	Y
Year dummies	Y	Y	Y	Y	Y
Price shocks 3/	Y	Y	Y	Y	Y
Obs.	1350	1350	1350	1350	1350
Number of groups	45	45	45	45	45

Absolute value of z statistics in parentheses. * significant at 5 percent; ** significant at 1 percent.

1/ Excluding Germany,
2/ FE=fixed effects, RE=random effects,
3/ Education fees in April 2007 and medical services in January 2006.

R-squared 0.4536 for most models.

9. **To summarize, we find an acceleration of the inflation rate in all VAT items in 2006, preceding the expected jump in January 2007**. Analysis not reported here indicates that the acceleration of core inflation was not driven by cyclical effects, like the closing of the output gap in Germany, nor by one-time effects, such as the World Cup. Among VAT items, inflation accelerated faster among durables and items in less competitive markets, indicating that rent extraction may have been a motive.[3] There was no evidence of a delayed VAT effect after implementation.

10. **Based on these results, we calculated the effects of the VAT increase on core inflation.** We use the coefficients in Table I-1 to estimate the model's predicted increase in inflation over two time periods: over 2006 and over the first quarter of 2007. These are reported in Table I-2.

- Our model predicts an increase in core inflation of 0.34 percentage point due to VAT items in 2006 and 0.65 percentage point in January 2007, a total of 1 percentage point.
- Overall core inflation, as defined in our sample, increased by 0.41 percentage point in 2006, and by 0.71 percentage point in January 2007, for a total of 1.12 percentage points. Thus, virtually the entire increase in core inflation was VAT related.
- Among VAT items, price increases in durable goods and items in markets with imperfect competition accounted for a 0.13 percentage point increase in core inflation in 2006 (of the 0.34 percentage point increase in core inflation in 2006 due to VAT), that is, about one-third of the increase.
- While core inflation rose by only 1 percent due to the VAT, the actual pass-through rate to core inflation was 62 percent. This is because the hypothetical 100 percent pass-through of the VAT increase from producers to consumers would have had an effect of 1.6 percent on core inflation (1/1.6).[4]

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[3] More results presented in a forthcoming working paper by the same authors. Items whose prices rose sharply at the introduction of the euro also experienced steeper price increases in 2006. This indicates that differences in price-setting power may have played a role, but the results are not statistically significant.

[4] Knowing the timing of the increase, this pass-through rate can be broken down further, to an average 22 percent in 2006 and 41 percent by January 2007. This is not the same as an individual pass-through, which is expected to be much higher.

Table I-2. Decomposition of Core Inflation as Predicted by the Model[1]

	2006 Annual average[2]	2007 Impact[3]
Total	0.41	0.71
VAT	0.34	0.65
Durables	0.07	…
Imperfect competition	0.06	…
Other	0.21	…
Non –VAT	0.07	0.12
Memorandum item:		
Inflation pass-through	0.22	0.41

[1]Coefficients of specification (5) in Table I-1 were used
[2]Difference in core inflation between December 2006 and January 2006.
[3]Difference of core inflation between first quarter of 2007 and fourth quarter of 2006.

D. Conclusions

11. **Increases in core inflation due to the VAT hike were smaller than expected, initially constituting a puzzle and leading to speculation about delayed increases or competitive pressures.** This paper has explored the extent of the inflation generated by the anticipation of the VAT increases and related this to the overall inflationary impact of the VAT-related price increases.

12. **An increase in inflation in VAT items contributed 0.34 percentage point to core inflation in anticipation of the actual implementation, and a further 0.65 percentage point increase occurred at implementation in 2007.** As consumer demand increased in 2006, producers were able to raise their prices, more so in durable goods. Accordingly, the extent of the increase in January 2007 was more muted. Cumulatively, the VAT effect contributed to virtually the entire increase in core inflation during this period. However, the effect could have been larger: the modest pass-through of about 60 percent kept the core inflation lower than it would otherwise have been.

13. **The more general implications of these results are as follows**. Price setting in Germany is quite competitive, with less than two-thirds of the VAT increase being passed on to consumers. Durable goods and products in markets with imperfect competition contributed to about one-third of the VAT-induced price increase that did occur throughout 2006. This paper also finds that, though German prices are often considered sticky, producers do adjust prices in response to shocks in a manner that is gradual and not disruptive.

APPENDIX

A. Data

14. All 53 commodity items with the respective HICP-weights are used. Since the study focuses on core inflation, the two energy-related items, 19 and 32, were dropped from the analysis, even though they are subject to VAT increases. Furthermore, given their high volatility, seasonal goods (fruit, vegetable, and package holidays), and tobacco were dropped from the analysis, leaving a total of 45 items with a total HICP weight of 80 percent.

B. Method

15. We estimated inflation in VAT items relative to non-VAT items. Therefore, the difference between the inflation rates in VAT and non-VAT items would give us exactly the role played by the VAT in raising certain prices, since we assume that inflationary trends due to common shocks, or common cyclical conditions to those in the euro area.[5] In fact, we trace inflation in any individual item over time and relative to items not exposed to the VAT hike: during the announcement period, the implementation and post-implementation, after controlling for time dummies, and commodity-specific items (goods are durables, or sold in a competitive market). The data used for the empirical analysis are from the monthly HICP at the two-digit level. We use random-effect models, which fit the data better than fixed-effects model. Moreover, intuition will imply different price increases per item, depending on the market, and type of goods.

16. The annual inflation rate for any commodity item $\dot{p}_i^t$, in the German CPI is

$$\dot{p}_i^t = \alpha_1 + \alpha_2 \dot{p}_{i,Euro}^t + \alpha_{3t} Vat_i^t + \Sigma_j \alpha_{jt} Z_j^t$$

where $\dot{p}_i^t$ —the dependent variable, the inflation rate of the item —is computed as $\dot{p}_i^t = w_i(\frac{P_i^t}{P_i^{t-12}} - 1)$; P_i^t is the index of item i at time t, w_i is the weight in the aggregate HICP index.[6]

- α_2 controls for general price increases due to common shocks or common cyclical conditions, as in the euro area during this period;
- α_3 measures the effect of the VAT and is elaborated in various ways, to control for timing (see main text); and

[5] In the euro area, inflation of VAT and non-VAT items moved similarly in this period, and the difference in inflation rates among these items was relatively constant. In Germany, however, we observe the rate of inflation of VAT items accelerated during 2006 only.

[6] Since we are interested in the impact of the VAT hike on the aggregate HICP inflation rate, we use weighted inflation rates.

- α_j measures the effect of control variables and is elaborated in various ways, to control for different commodities issues (see main text).

C. Calculating The Effect on Core Inflation

17. We calculate the model-predicted inflation rate, and to obtain the values in Table I-2 we go through the following steps:

a. We take the actual value for each variable described above, in each month, and we multiply it, by its estimated coefficient presented in Table I-1, specification (5), and by the number of the items in this group (VAT and non-VAT).[7]

b. We sum these components to obtain predicted inflation rates for each month (annual rates).

c. To calculate the 2006 overall effect, we take the difference between the predicted values of the core inflation rate between the months of December and January 2006.

d. To calculate the 2007 implementation effect, we take the difference between the average predicted core inflation rates of the first three months of 2007 and the last three months of 2006.[8]

e. To calculate the contributions of the VAT items to the 2006 overall effect, or 2007 implementation effect, we follow steps 3 and 4, respectively, but only for the VAT items in core inflation.

[7] By multiplying the group average effect by the total number of items, we obtain the aggregate inflation effect of the VAT items as a group. The aggregate HICP core inflation rate is defined as the weighted sum of all individual items. A coefficient attached to a dummy variable captures the group effect of a subset of items scaled by their weight in the aggregate core index.

[8] If one takes the differences between the January 2007 and December 2006 rates the results are similar.

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II. Growth Linkages Within Europe[9]

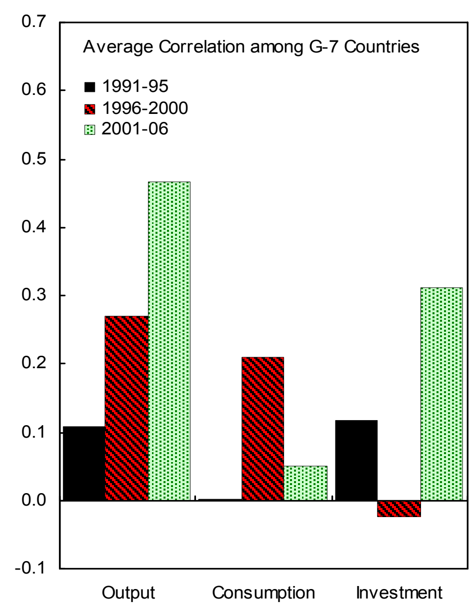
18. **Germany's recent economic recovery has revived a debate about its role as an engine for growth in Europe.** Some observers argue that the robust and broad upswing in the euro area has much to do with the turnaround in Germany, while others have emphasized its weak domestic demand, which may have limited growth spillovers to other European economies.[10]

19. **This chapter compares comovements of German output with those of its major trading partners.** A vector autoregression model (VAR) is estimated to empirically evaluate growth spillovers between the U.S., Japan, Europe, and Germany. Impulse response analysis is used to assess the size and direction of economic linkages and to gauge changes of transmission over time.

20. **The main finding is that growth spillovers from Germany were limited in the past but are more prominent now.** Estimates for the most recent period (1998-2007) indicate that a ½ percent increase of German GDP is associated with ¼ percent higher growth in the rest of the euro area and ½ percent higher growth in the new EU member countries after three quarters. These findings point to stronger economic ties within Europe especially with the new member states (e.g., through offshoring).

A. Stylized Facts and Motivation

21. **With greater economic integration and the globalization of financial markets, the correlation of activity among industrial countries has steadily increased** (text figure). Studies using common factor models find that activity in industrial countries has become more synchronized and driven by common international factors (Stock and Watson, 2005). In Europe, a common business-cycle has begun to emerge (Artis, Krolzig, and Toro, 2004).



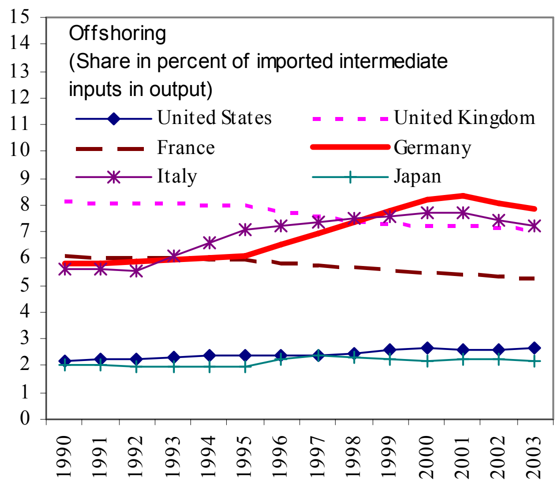
Sources: IMF World Economic Outlook and staff calculations.

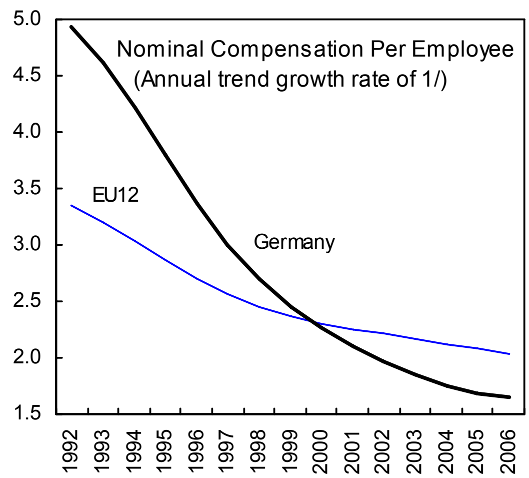
22. **Germany's contribution to this process is not clear**. Since the mid-1990s, Germany has been going through a period of restructuring. In particular, German firms have taken advantage of cost-saving opportunities through regional economic integration (text figure). The growing international division of

[9] Prepared by Stephan Danninger.

[10] See various contributions by Sebastien Dullien and Wolfgang Munchau at http://www.euro-area.org/blog.

labor improved competitiveness and strengthened the performance of the export sector (Danninger and Joutz, 2007). The Bundesbank noted that this process tied the new EU member states closer to economic activity in Germany (Bundesbank, 2006). At the same time, however, wage growth has slowed—responding to a weak labor market—and dampened private consumption. So, while improvements in cost competitiveness have enhanced international trade linkages, domestic demand has been weak and restricted spillovers through the import demand channel.[11]





Sources: IMF World Economic Outlook and staff computations. 1/ Hodrick-Prescott filtered series.

23. **Moreover, evidence on the degree of economic spillovers within Europe is limited.** Empirical studies find that output in Europe responds positively to growth impulses from the U.S., while impulses originating in Europe have only small effects on other areas or countries (e.g., IMF 2007; Bayoumi and Swiston, 2007). Within Europe, greater comovement appears linked to intensified trade within industries, reflecting greater specialization (Böwer and Guillemineau 2006) and increased financial integration (Imbs, 2004). For Germany, results from calibrated general equilibrium models show that growth spillover effects through the trade channel are small (Botman and Danninger 2007). These models do not, however, capture the effects of financial integration very well and abstract from other spillover effects (e.g., balance sheet effects, sentiments).[12] The next section presents empirical results on aggregate growth linkages between Germany, Europe, and other economic regions.

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[11] See Selected Issues Chapter of the 2006 Article IV Consultation: "Exports and Domestic Demand in Germany: Has the Nexus Been Altered by Globalization?," IMF Country Report No. 06/436.

[12] The model captures financial integration only through effects on the global fundable loans market.

B. An Empirical Model of Growth Spillovers

24. **In this chapter, economic spillovers are assessed by analyzing comovements of output activity between economic regions and countries**. The analysis is based on a VAR of real GDP growth for the post-unification period. The objective of the analysis is to identify the size and direction of spillovers within Europe and to assess whether the size and structure of these spillovers have changed over time.[13]

25. **The basic VAR uses data on real GDP growth for the U.S., Japan, the non-German euro area, Germany, and the new EU member countries**.[14] Data were obtained from the IMF's WEO-database for the period from 1993:Q1 through 2007:Q2. Standards tests confirm that all variables are integrated of order one with marginally significant results for the new EU member countries (Table II-1). The VAR was estimated using three lags.[15] The baseline results use the following country order in the VAR: U.S., Japan, the euro area, Germany, and the new EU member countries.

26. **Impulse response functions show sizeable growth spillovers from the U.S. and strong interactions within Europe**. Figure II-1 shows growth responses to shocks in real GDP using standard Cholesky decomposition techniques. Each row depicts the responses from shocks originating in one region or economy. Similar to other studies, a growth impulse originating in the U.S. increases growth in the euro area (by about half of the impulse). But the effect in the other direction is weak. The direct effects of a U.S. growth impulse on Germany and on the new EU member states are small and not statistically different from zero. But the indirect effects are strong: U.S. growth stimulates growth in the non-German euro area, and growth impulses from the euro area translate almost one for one into higher growth in Germany.

27. **These results are robust to different country orderings.** The VAR was estimated with alternative country orderings for the U.S., Japan, and the euro area and also estimated without Japan. The impulse response patterns were largely unchanged.[16]

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[13] This approach was preferred to a common factor analysis or to simulations from a calibrated general equilibrium model. The results from the former studies are often difficult to interpret and calibrated models offer limited insights about the effects changing economic structures and integration processes.

[14] These include Poland, the Czech Republic, the Slovak Republic, and Hungary.

[15] The analysis was based on annual growth rates since quarter-on-quarter growth rates exhibited excessive autocorrelation in the estimated system. Standard information criteria suggested either lags of one or four quarters, but in both cases residuals were highly autocorrelated. Hence, a three lag specification with no autocorrelation was chosen (Table II-2).

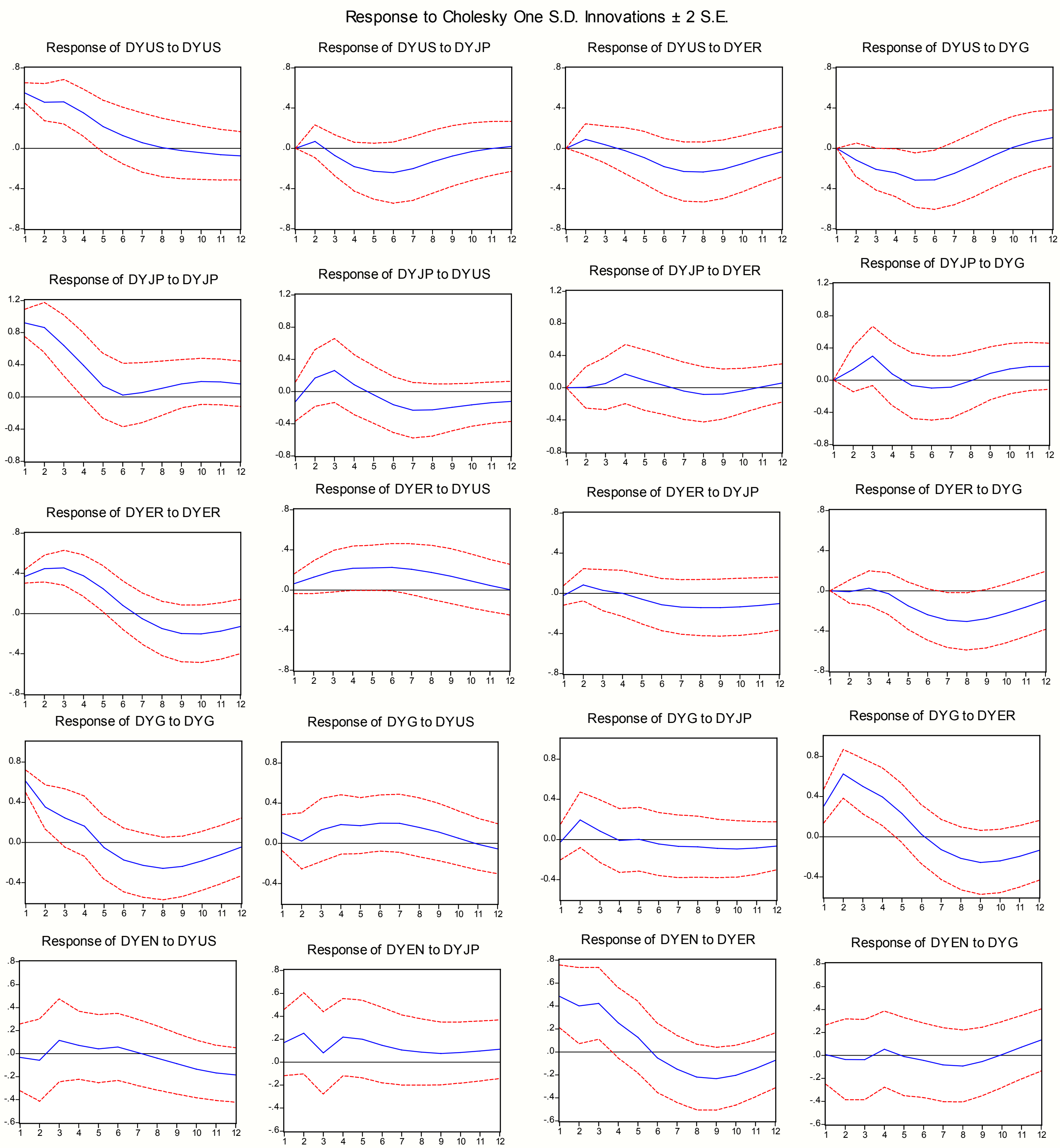
[16] Only if Germany is ranked ahead of the euro area in the Cholesky ordering—an unrealistic assumption—can positive albeit small spillovers be found.

28. **There was a structural break in the VAR in the second half of the 1990s (Figure II-2)**. A VAR analysis based on the last 10 years shows stronger spillovers from Germany to the euro area and the new member countries. Dropping the first five years from the VAR analysis reveals that impulses from Germany have statistically significant effects (Figure II-3). A growth impulse originating in Germany of 0.5 percent is associated with an acceleration of growth in the euro area of 0.2 percent over three quarters. The effect on the new member countries is more pronounced and leads to a one-for-one increase in the growth rate over 3 quarters. These results are consistent with claims that the ongoing integration process in Europe leads to stronger comovements of activity.

C. Conclusions

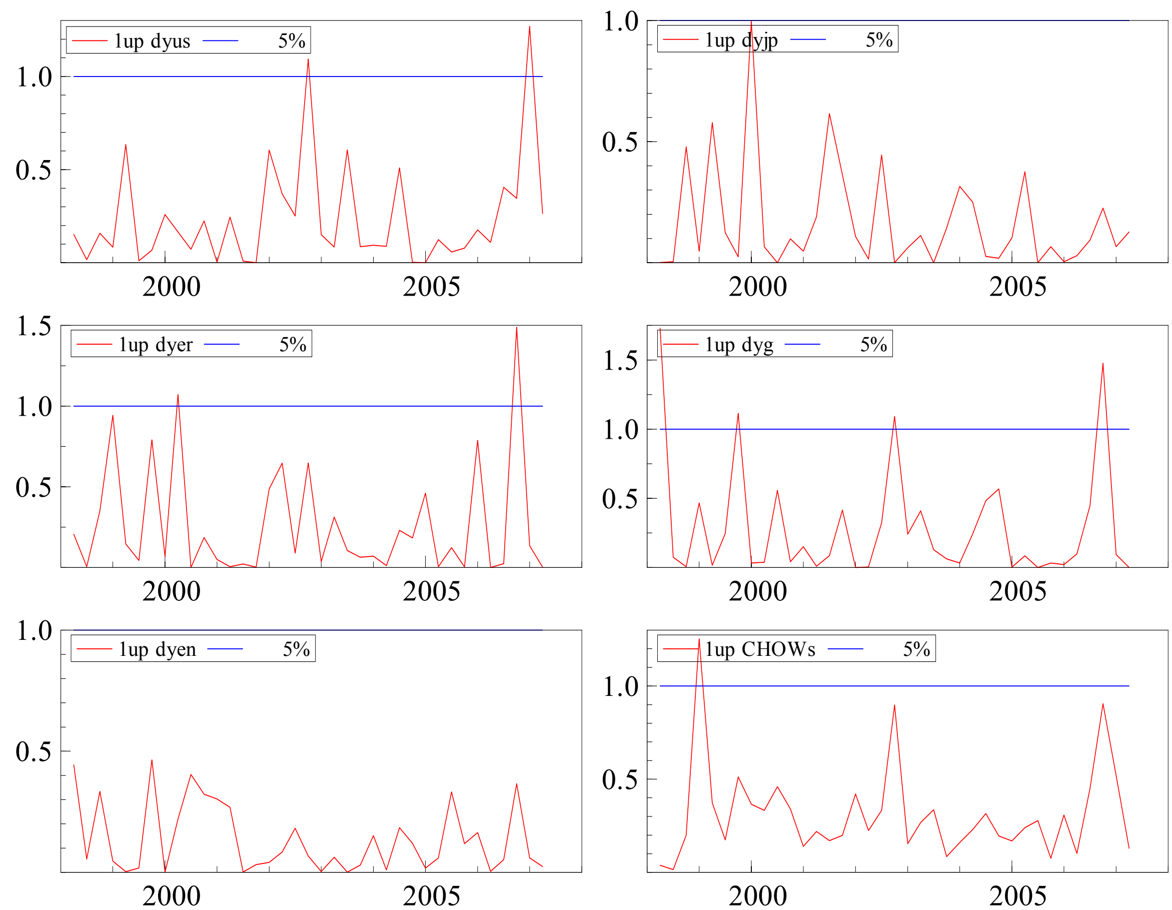
29. **Given Germany's large size and openness, spillover interactions appear to have increased over time.** A VAR analysis confirms findings of other studies that growth innovations in the U.S. have the largest spillover effects. Only in the last decade have spillovers in Europe have become more pronounced. Impulses originating in Germany are associated with higher growth in the euro area and the new EU member states. While the notion of Germany as an engine of growth in Europe is an exaggeration, growth in neighboring regions—and especially with the new EU member states—has begun to move in tandem with growth in Germany.

Figure II-1. Impulse Responses of Baseline VAR, 1993-2007 1/



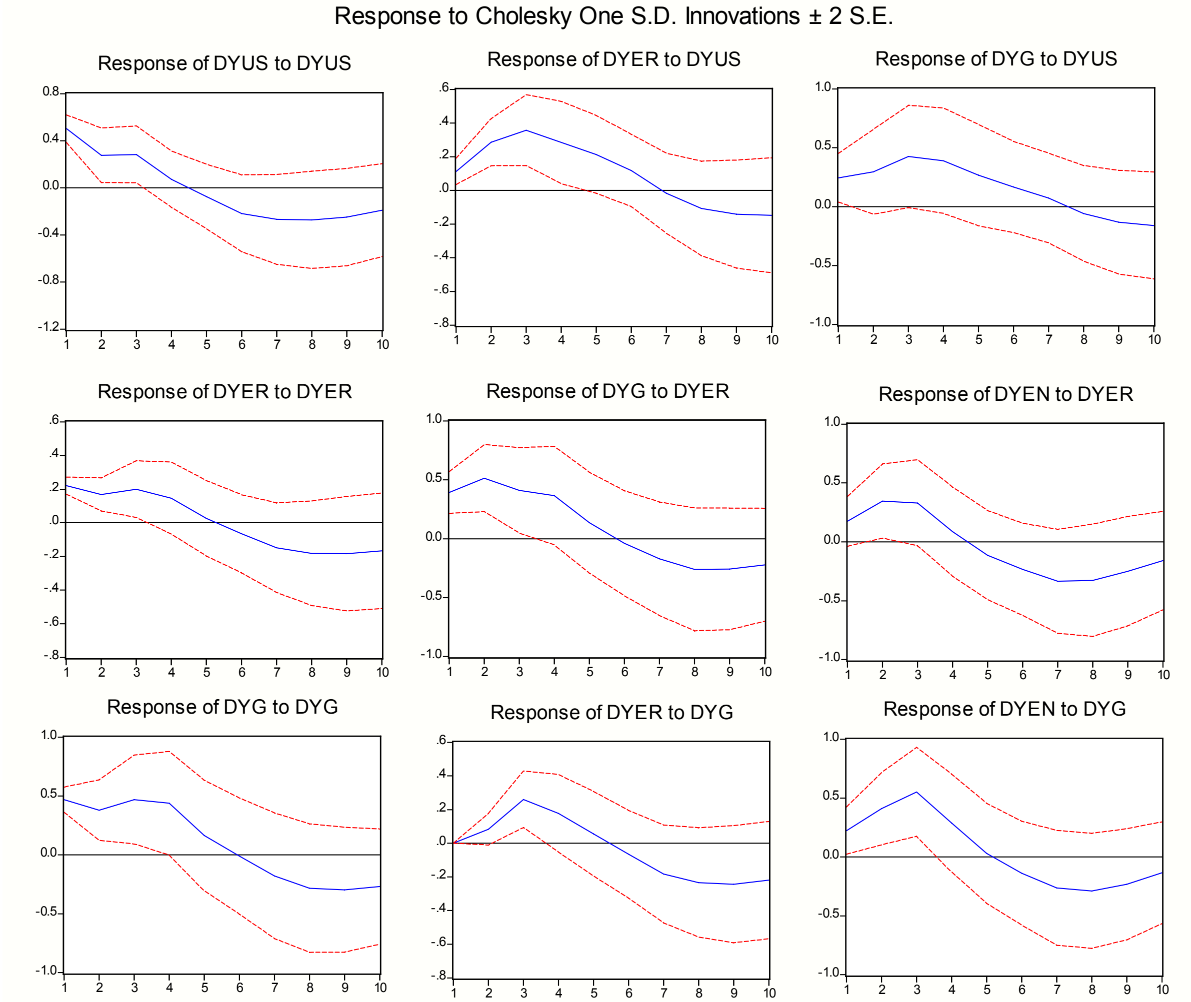
Source: Author's computations.
1/ Variable definitions: DYUS GDP growth rate in the US, DYJ GDP growth rate in the Japan, DYER GDP growth rate in the euro area, DYG GDP growth rate in the Germany, DYEN GDP growth rate in the new EU member states.

Figure II-2. One-Step Chow Tests



Source: Author's computations.
1/ Variable definitions: DYUS GDP growth rate in the US, DYJ GDP growth rate in the Japan, DYER GDP growth rate in the euro area, DYG GDP growth rate in the Germany, DYEN GDP growth rate in the new EU member states.

Figure II-3. Impulse Responses, 1998-2007



Source: Author's computations.
1/ Variable definitions: DYUS GDP growth rate in the US, DYJ GDP growth rate in the Japan, DYER GDP growth rate in the euro area, DYG GDP growth rate in the Germany, DYEN GDP growth rate in the new EU member states.

Table II-1. Augmented Dickey-Fuller Tests for Unit Roots

Levels: Sample 1993:Q1–2007:Q2

Variable	*t*-adf	beta *Y*_lag	*t*-*DY*_lag	Maximum Lags	AIC
yu	0.0507	1.0002	0.5838	1	-1.497
yjp	0.3428	1.0069	na	0	-0.524
yer	1.451	1.0062	na	0	-2.225
yg	0.2277	1.0027	na	0	-1.176
yen	-0.995	0.9550	na	0	3.472

Notes: Constant, trend, and seasonals included; critical values; 5%=-2.91, 1%=-3.55.

First Differences: Sample 1993:Q1–2007:Q2

dyu	-2.943*	0.78208	1.752	2	-0.9452
dyjp	-3.072*	0.70942	0.1358	2	0.0454
dyer	-3.865**	0.82468	1.581	2	-1.796
dyg	-3.178*	0.74086	1.758	2	-0.3119
dyen	-2.745	0.73955	-0.2921	3	0.3033

Notes: Constant, trend, and seasonals included; critical values; 5%=-2.91, 1%=-3.55.

Table II-2. Residual Tests for Autocorrelation, Normality, and Heteroscedasticity

	1993-2007			1998-2007		
	AR 1-4 Test	Normality Test	ARCH 1-4 Test	AR 1-4 Test:	Normality Test	ARCH 1-4 Test
	F(4,38)	Chi^2(2	F(4,34)	F(3,19)	Chi^2(2	F(3,16)
dyus	2.1400	0.61396	2.6886	2.6886	1.2367	0.79328
	[0.0947]	[0.7357]	[0.0755]	[0.0755]	[0.5388]	[0.5153]
dyjp	2.1315	7.2832	1.4770	1.4770	2.7121	0.28445
	[0.0957]	[0.0262]*	[0.2526]	[0.2526]	[0.2577]	[0.8359]
dyer	2.1874	7.6852	1.2904	1.2904	2.9700	0.33468
	[0.0889]	[0.0214]*	[0.3064]	[0.3064]	[0.2265]	[0.8005]
dyg	1.4425	0.55091	1.5773	1.5773	1.2061	1.1028
	[0.2389]	[0.7592]	[0.2278]	[0.2278]	[0.5471]	[0.3768]
dyen	0.34903	12.866	0.67943	0.67943	7.0434	0.067933
	[0.8430]	[0.0016]**	[0.5754]	[0.5754	[0.0295]*	[0.9762]
dyus	2.1400	0.61396	2.6886	2.6886	1.2367	0.79328
	[0.0947]	[0.7357]	[0.0755]	[0.0755]	[0.5388]	[0.5153]
dyjp	2.1315	7.2832	1.4770	1.4770	2.7121	0.28445
	[0.0957]	[0.0262]*	[0.2526]	[0.2526]	[0.2577]	[0.8359]

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III. Economic Impact of Shortages of Skilled Labor in Germany[17]

30. **Germany's shortage of skilled labor is growing**. A 2007 report commissioned by the Ministry of Economy found that these shortages cost the economy € 20 billion this year. Another 2007 study found that just the lack of engineers (22,000 vacant jobs) costs the economy € 3.7 billion annually.[18] As each high-skill job creates opportunities for employment for other jobs, this points to particularly big losses for the economy at this time. Moreover, the shortages will be exacerbated as the population ages; official projections show that even now university graduates cannot fill the requirements. Although there is a large pool of unemployed and labor force participation could be further increased for some participants, the current pool of native German workers does not provide the full complement of needed skills. In this context, net migration is a particular concern. It adds to the labor shortages as high-skill natives leave, fewer return, and foreigners go somewhere else.

31. **This paper discusses a two-pronged approach that the government can undertake to alleviate shortages of skilled labor and boost growth.** Section I reports the basic facts, section II discusses the rationale of the proposed policy approach, and section III presents the simulated effect of immigration and increased labor force participation on output and investment in a general equilibrium model. Section IV concludes.

A. Stylized facts

32. **Job vacancies are at the highest level in 15 years**. They are widespread across sectors, and regions, but particularly acute in key production skills (metalworking, mechanical and electrical engineering), and services relevant for human capital development (child care and university teachers), and in the states with the highest growth rates (Baden-Württemberg and Bavaria).

33. **The available pool of native workers is proving insufficient to fill these vacancies:**

- Although the pool of *unemployed* is still large at 2.8 million people, to use this pool of workers in the vacant high-skilled jobs would require considerable training.
- While there is scope to further increase labor force participation, the gains are likely to be limited since the German participation rate is now above the euro area average and has increased significantly for older workers and for women.

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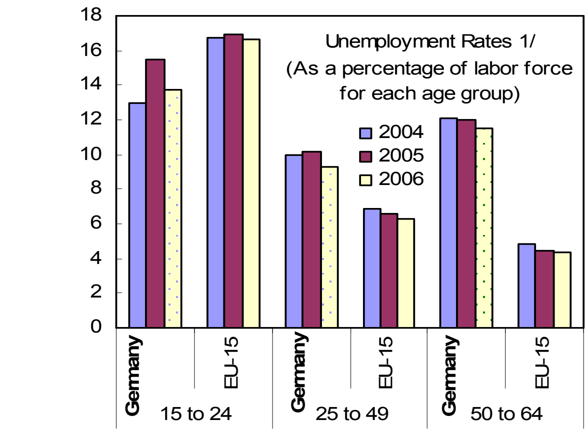
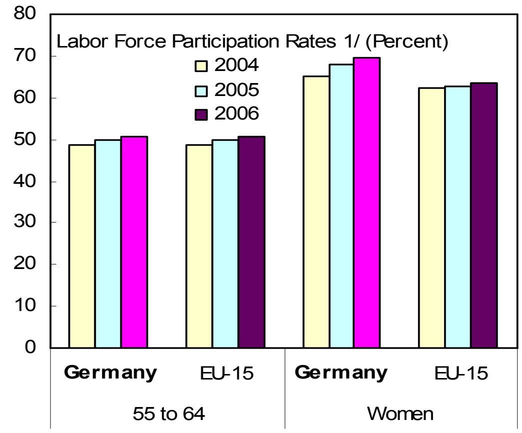
[17] Prepared by Alina Carare.

[18] Association of German Engineers. "Some Sectors in Europe Face a Labor Shortage", New York Times Article dated March 10, 2007.

- *University graduates and apprentices* with the right skills are insufficient in number, and in the future, the skills mismatch and shortages are projected to widen.

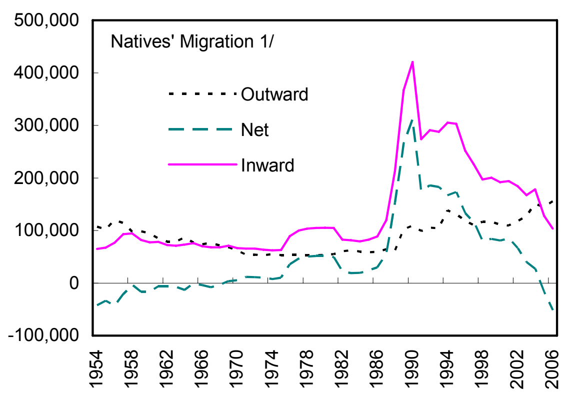


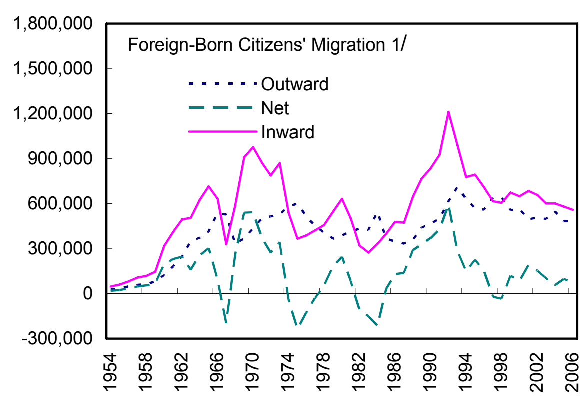


1/ EU-15 excludes Germany.
Source: Eurostat Labor Force Survey.

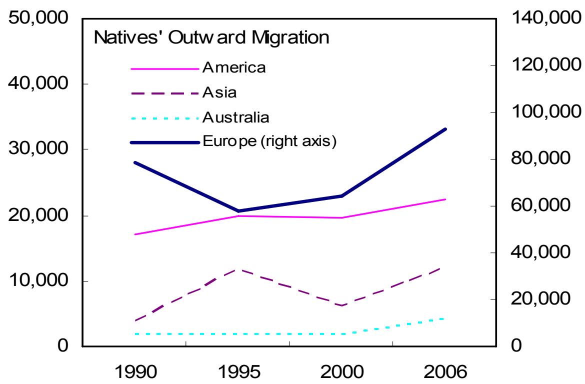
34. **Migration exacerbates these shortages, primarily for two reasons:**

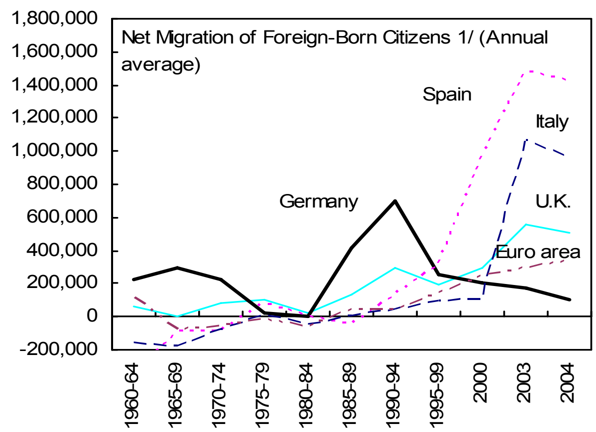
- *Natives* are emigrating in record numbers, and fewer return. This outflux was stepped up in the early1990s and has accelerated since 2002. High-skill workers are increasingly among those leaving. Their determinants are analyzed in the next section.
- The inflow of *foreign workers* has decreased.





1/ Inward migration less outward migration.





1/ Inward migration less outward migration.

35. **The current shortages and migration trends are expected to persist**. The population is shrinking earlier and aging faster than initially expected, as net migration has been below the natural population growth for the past five years. With fewer workers to hire and fewer consumers with large disposable incomes, firms will have lower incentives to innovate and retain their production facilities in Germany. Offshoring from Germany due to shortages of high-skill labor, as opposed to older motives (cheaper low-skill labor), are already documented (Marin, 2004).

B. Rationale for Policy Changes

36. **The best policy mix is a two-pronged approach**. First, policies are required to increase the labor supply of the natives. These policies, though with limited potential in the short term as noted above, would move people from unemployment to work and increase the labor force participation. In addition, efforts to retain skilled Germans will be important. Second, given the immediacy of the situation, relaxing some immigration restrictions will help fill vacancies now.

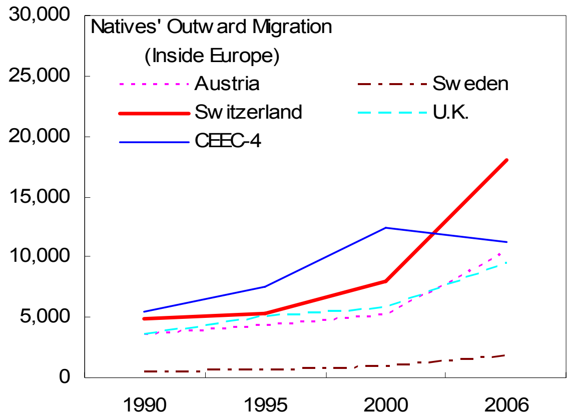
37. **The 2007 report commissioned by the Ministry of Economy presents various policy options consistent with this two-pronged approach.** These include subsidies to universities (to increase the number of graduates and to attract foreign students), strengthening labor programs for moving people to work from unemployment, retraining and increasing labor force participation, and relaxing immigration restrictions on skilled workers.

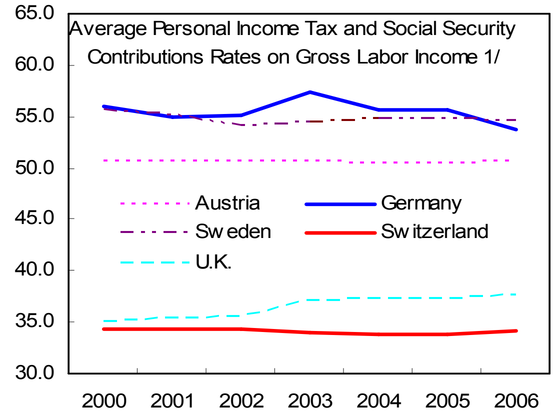
38. **A key step in formulating policy is to better understand emigration decisions**. Currently, little research is being done in this area, and emigration surveys are non existent. In the late 1980s Germany became more open in attracting citizens of German origin living abroad. Also, when the cold war ended, other countries allowed their citizens to leave more freely. Hence, the influx of natives immigrating to Germany increased, peaking in 1991. However, countervailing forces set in thereafter:

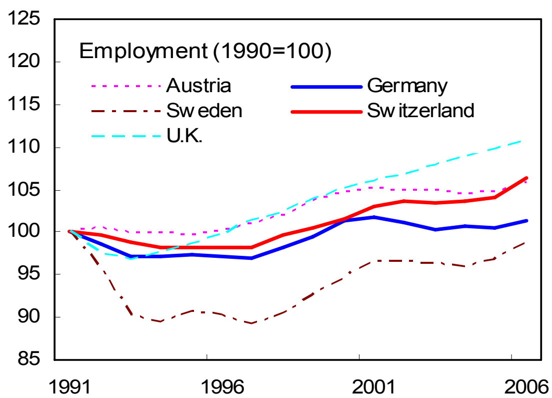
- Other countries offered a dynamic environment for skilled immigrants. They did this either through universities or companies (e.g., H1B visas for Silicon Valley workers) or through government programs (for Australia, see OECD, 2007).
- Lifetime income profiles in Germany are, on average, flatter than elsewhere, implying lower returns to experience; this is on top of the relatively wide tax wedge (see below).
- German skilled labor was attracted to move with German capital in response to extensive offshoring to destinations in Asia and CEEC-4 countries.

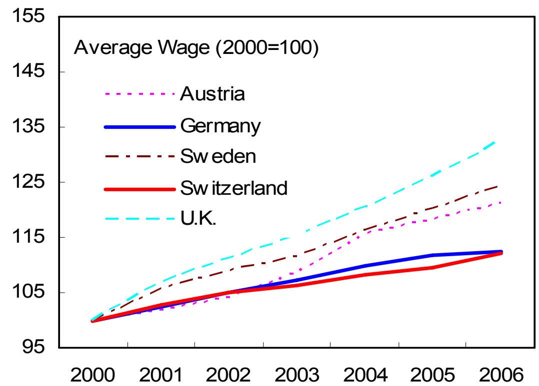
39. **The acceleration of emigration since 2002 reflects a combination of these factors**. As Germany sought to regain competitiveness through labor shedding and wage moderation, the short-run prospects for workers worsened. Emigration increased to the U.K. because of a lower income tax wedge and better employment and wage prospects. Emigration also increased to countries with the same tax wedge, but more dynamic wage and employment prospects (Austria), or a lower tax wedge, but similar employment and wage dynamic prospects (Switzerland).

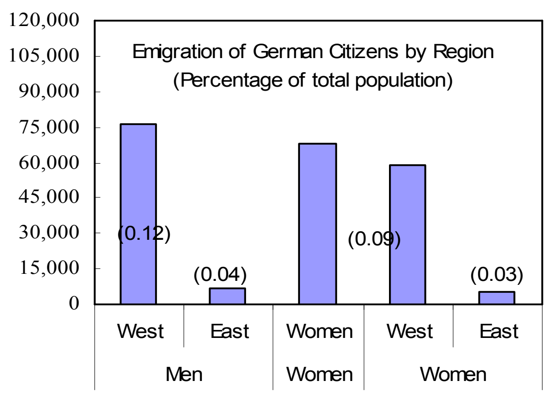
40. **Although improved economic domestic economic prospects may stem emigration, the acceleration since 2002 also has structural elements.** First, current emigration of natives is much higher from the West, pointing to structural, rather than temporary factors (one would expect higher emigration from the East, given the higher unemployment rate there). Second, Germany stood out, even in 2001, as the largest European and industrial country experiencing high-skill emigration, without existing historical trends, as in other countries. Moreover, the income tax wedge remains high to support fiscal consolidation in the context of a fast-aging population and large welfare system.

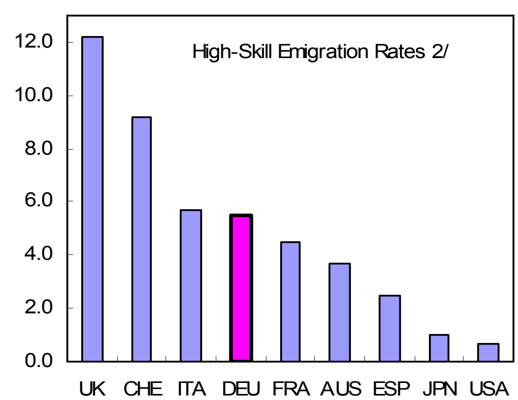












1/ This graph reports average personal income tax and social security contribution rates for a single person without dependent at multiple of 167% of the average production wage to average personal wage, OECD.
2/ High educated expatriate population as a ratio to high educated native born population, 2000-2001.
Sources: German Federal Statistical Office, OECD, Barro RJ. and JW. Lee, 2000, International Data on Educational Attainment: Updates and Implications, NBER Working Paper No. 7911, and Cohen D. and M. Soto, 2001, Growth and Human Capital: Good Data, Good Results, OECD Development Centre Working Paper No. 179.

41. **Therefore, the government is contemplating relaxing certain immigration restrictions to fill shortages of skilled labor**. The Immigration Act approved in 2004 did not attract as many high-skill workers as expected because it set a high threshold for what constitutes high skill (defined as earning € 84,000 a year). Also the Act increased the burden of seeking immigrant workers because it requires job vacancies to be first filled by German or old member state citizens, then by citizens of new member states, and then by other' areas residents. In addition, Germany retains restrictions against entry of new member states workers of any skill, while other major European countries opened up in 2004 and 2006. As a result, faced with unprecedented high skill labor shortages, and larger vacancies than in past cycles, the authorities are contemplating some changes. The Deputy Interior Minister has indicated the authorities' intention to open up labor markets for new member states before 2009, when the existing restrictions expire. As of November 1, 2007, engineers from new member states can compete equally for vacancies with euro area nationals. This leaves for resolution the further issue of either defining a lower earnings threshold for defining high-skill labor, or instituting a points system, as the original immigration law draft envisaged, and the proposals for European Commission suggest.

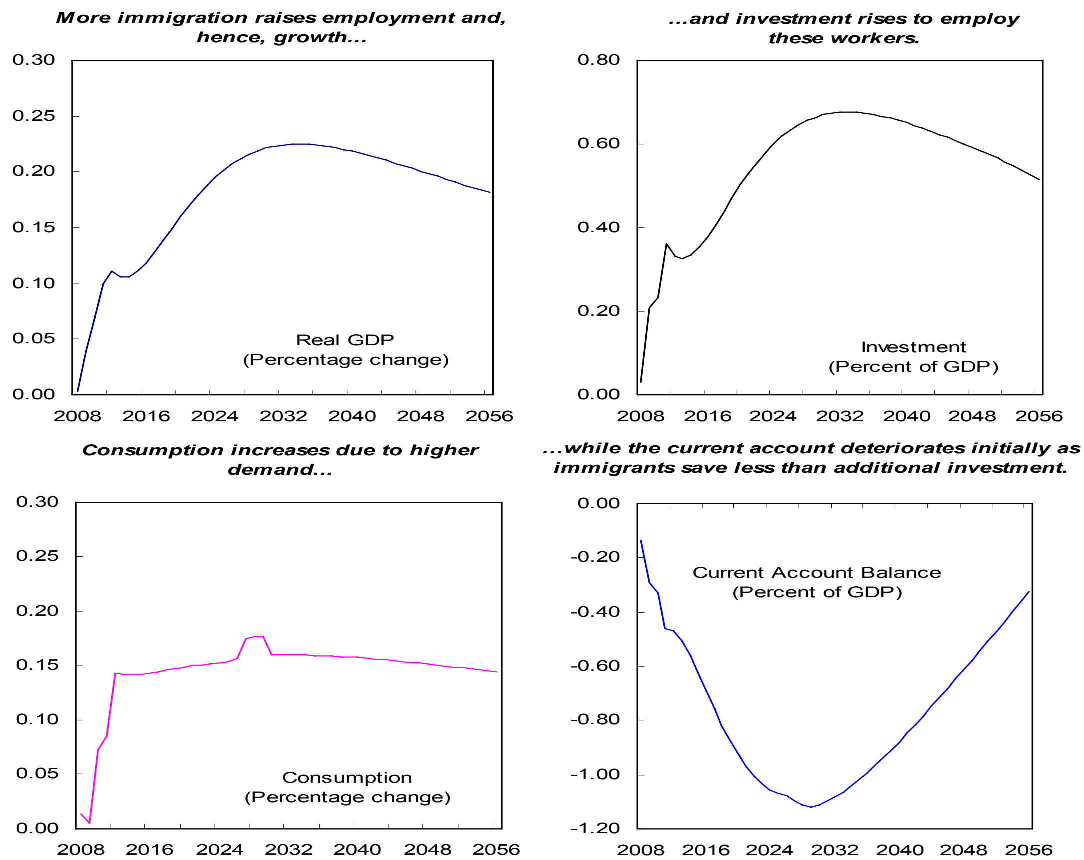
42. **While many complex considerations apply in evaluating easier immigration, opening up the borders in Germany will benefit Europe as a whole**. Danninger (2007) concludes that a growing Germany is beneficial for Europe. While Germany is facing a potentially more serious labor shortage than other European countries, German efforts to ease skilled-labor immigration will dovetail with broader efforts to attract high-skill labor to Europe. The European Commission is moving in this direction as part of the Lisbon Growth Strategy. Studies that have assessed the impact of immigration from new member states since 2004 (European Commission, 2006; and ECB, 2006) point to beneficial effects on output, and public finances, with neutral effects on wages and employment for countries that relaxed immigration restrictions.

C. Simulations

43. **An experiment is performed on a baseline describing the German economy to assess the implications of increasing the labor force**. We used an extension of the Multimod, a dynamic general equilibrium model incorporating demographics, life-cycle earnings, and savings dynamics, with demographic changes. A detailed description of the model and data used is available in the Appendix (see also Laxton and others, 1998, Faruqee, 2002, and Faruqee and Laxton, 2000). The effect of an increase of the labor force of 100,000 persons each year is simulated (or an annual increase of 0.3 percent). Such an increase can be obtained either by increasing the labor force participation rate or by increasing immigration. While the orders of magnitude of the ultimate effects are similar (see forthcoming working paper), greater immigration increases the size of the population and, to the extent that the immigrants are younger, mitigates the aging problem.

44. **An annual net increase in migration of 100,000 adults compared with the baseline—a level reached or exceeded consistently since unification until a few years ago—could raise real GDP by 0.2 percentage point a year**. The size of the migration shock was calibrated as follows. We assume that from 2009 until 2011, net migration is increased gradually to 100,000 workers per year (we do not differentiate here between skilled and unskilled labor, but the underlying assumption is that, in keeping with current ratios, about one third of the inflow will be high-skill). What are the effects? With more adults joining the workforce, investment and capital stock will also rise. A virtuous cycle of increase in income and consumption will then follow. The current account will deteriorate initially, but improve later as individuals start saving for retirement and older cohorts become more numerous. These results, while robust to a variety of parameter changes, are sensitive to changes in population projections because output is closely tied to the size of the labor force. The results are, however, model specific, and further refinements will need to allow for differential productivities according to skills, and also if we assume a difference in skills from native workers.

Effects of Relaxing Immigration Restrictions: Allowing 100,000
More Young Adults Per Year
(Deviations from baseline)



Source: Dynamic general equilibrium model with demographic and life-cycle earnings dynamics calibrated for Germany. Based on Blanchard-Yaari-Weil framework. Faruqee, Hamid (2002) Population Aging and Its Macroeconomic Implications: A Framework for Analysis, IMF Working Paper 02/16.

D. Conclusion

45. **In the midst of a strong recovery, Germany is facing shortages of labor, the emigration of high-skilled labor, and a reduction in immigration.** Addressing the immediacy of high-skill shortages by relaxing immigration restrictions can help in raising investment and consumption, and potentially improving public finances. Increasing labor participation and improving training further are also necessities, as Germany is expected to age faster than most other countries, and the immigrants may not represent a long-lasting solution. Ultimately, reforming the economy to achieve a higher long-term potential output growth, better employment prospects, and high return to high-skill labor will raise standards of living in a sustainable manner.

APPENDIX

46. Data used:

- *Population* developments and projections are taken from the German Federal Statistical Office (Nov 2006).[19]

- Main *parameters* of the model correspond to 2006 national accounts ratios, or long-term trends.[20] [21]

- *Earnings* data come from the Federal Statistical Office.[22]

47. Model:

- This is an extension of the Blanchard-Yaari-Weil overlapping-agents framework. The production function is Cobb-Douglas, with capital and homogeneous labor as the factors of production. Investment behavior is based on Tobin's Q-theory—investment growth accelerates when the expected marginal product of capital is greater than its cost. Perfect capital markets are assumed, allowing firms to borrow freely at the world interest rate. Main equations of the model are presented in the Appendix, and the full model can be found in Faruquee (2002).
- Demographic developments affect both the supply and demand sides of the economy:

  - On the supply side, earnings are presumed to be a good indicator of changes in relative productivity and labor supply that occur over an individual's working life. The pattern of earnings over time is hump shaped—as workers

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[19] We used the middle scenario 1-W1-EJ (constant fertility rate, basic life expectancy, and net migration 100,000). We choose this scenario because in the past three years net migration was below this flow, and there were no improvements in the fertility rate. The model includes adults only, as we are interested in the effect on growth. For steady state, and transition: we use the following population assumptions: for 2051-90 we use World Bank growth rates of the population, and after 2090 we assume constant, slightly positive population growth, to allow the model to converge.

[20] The assumed long-term interest rate is 4 percent, the 10-year bond yield in Germany. The adjustment cost of the capital is 2.0, depreciation rate is 5.5 percent a year, rate of return to capital is 3.0; all widely used assumptions. The labor share of output is 60 percent. The steady state capital-output ratio is 2.5, similar the historical average. The rate of total factor productivity growth is assumed to be constant at 1.1 percent.

[21] Baseline values of growth rate decline from 2.2 percent in 2008 to about 1.0 percent in 2050. These calibrations are consistent with those in other studies.

[22] Earnings distributions relative to the 20-25 cohort, corrected for total population, not actual earners, are presented below. Data display the hump-shaped pattern present in most other economies but have a flatter profile. The fitted earnings are calibrated accordingly (they are the continues line in the figure).

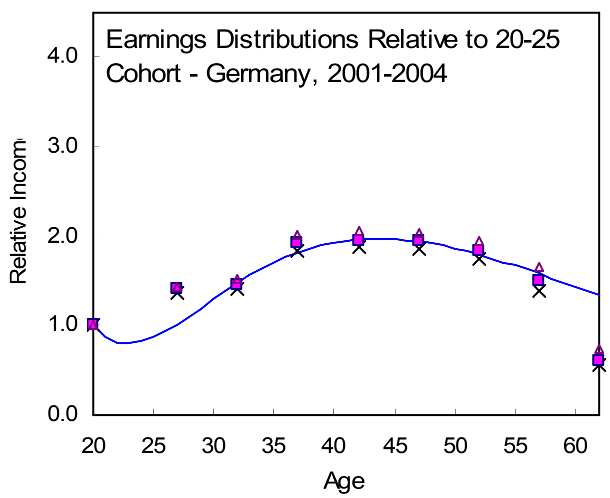
accumulate experience, their productivity and earnings increase. After peaking in middle age, earnings gradually decline into retirement. The rate of participation in the labor market follows a similar pattern. Changes in the age structure of the population will thus affect the effective labor supply (see relative earnings figure below).

- On the demand side, individuals are assumed to smooth consumption based on their anticipated life-cycle income. Younger individuals tend to be net borrowers, since their current income is below their permanent income. Middle-age individuals, whose relative earning are at their peak, save for retirement. Therefore, changes in the age profile of the population will also have an impact on aggregate consumption and savings.

- The estimated earnings are shown at the approximate mid-point of the age ranges used. The relative earnings profiles have been stable over the sample period, due to strong wage moderation. An exponential function is fitted through the age-earnings profiles to approximate the time-series pattern of a person's lifetime earnings:

$$y(s,t) = a_1 e^{-b_1(t-s)} + a_2 e^{-b_2(t-s)} + (1 - a_1 - a_2) e^{-b_3(t-s)},$$

- where y is relative labor income, t is the current year, and s is the year in which the individual entered the labor market. The b parameters are calibrated to fit the income profile (see below). These are based also on estimations by nonlinear least squares, using a grid search over the a parameters for other countries. These values are b1=0.07, b2=0.1, b3=0.08, and a=200.



48. Calibration:

- The baseline scenario is calibrated to reflect the main features of the German economy. For parameter values, see footnote 3. Since the results are presented in deviations from the baseline, they are quite robust to changes in the calibration parameters.

49. Simulations:

- An immigration shock is introduced into the model as an increase in the number of young people in the economy. We assume that from 2009 onward more young workers gradually enter the economy, up to 100,000 by 2011. This influx lasts in our model until 2056, after the model returns to the old steady state as the initially young workers retire. Details next.
- Choosing the size of the inflow immigration shock is not a trivial exercise. Zaiceva (2006) shows that projections vary widely, ranging from a stock of 800,000 immigrants in 2010, as forecasted by Dustmann and others (2003), versus 1,800,000 immigrants forecasted by Sinn and others (2004) for the same year. However, these stocks would corresponds to an average yearly flow of 107,500 adults migrating to Germany. In fact, this correspond to the 1-W2-EJ scenario of the German Federal Statistical Office (constant fertility rate, basic life expectancy, and net migration of 200,000) in the official population projections.

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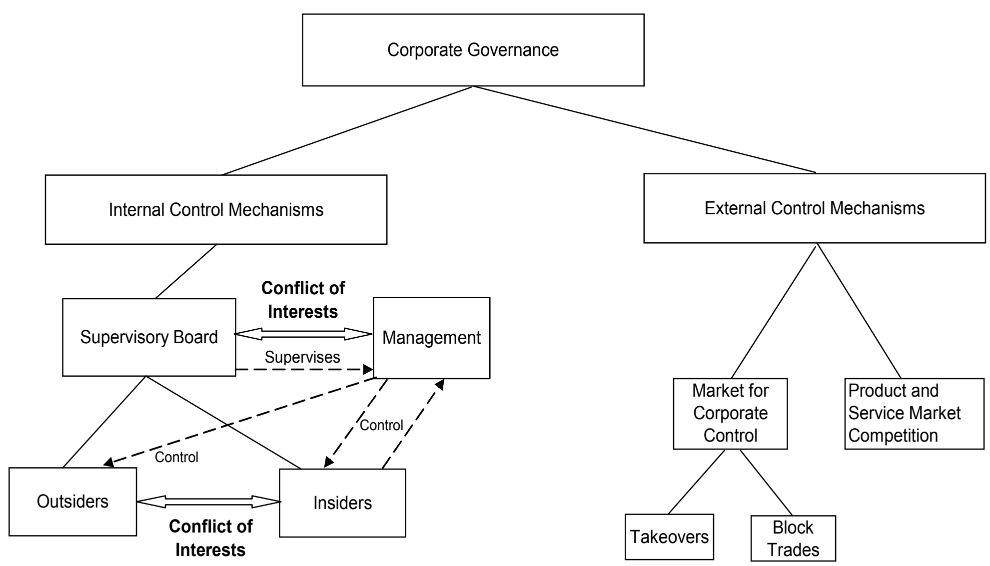
IV. GERMANY'S CORPORATE GOVERNANCE: TURNING INSIDE OUT?[23]

A. Introduction

50. **Concentrated ownership and "insider" control remain prominent characteristics of Germany's corporate governance system, notwithstanding far-reaching reforms.** Besides management, insiders include large shareholders, lenders, and labor.[24] The importance of large shareholders is derived from the high degree of ownership concentration, despite the substantial unwinding of cross-holdings catalyzed by changes in capital gains taxation in 2002 (Figure IV-1). Ownership structures remain complex and work against transparency in corporate control. Pyramidal ownership remains prevalent, allowing a dominant shareholder to exercise control of one company through the ownership of another. The elevated role of lenders is a reflection of the continued heavy, albeit declining, reliance on bank financing over capital market financing. Finally, labor representation is mandated by law and is more pronounced than in most other European countries.



51. **These unique features add to the complexity of the corporate governance challenge.** The divergence of management's objectives from those of owners is a well-established phenomenon in the literature. Addressing this innate conflict of interest, as illustrated in the text chart, is the core task of any effective corporate governance system. A closely related issue is the problem of self-dealing: asset-diverting behavior on the part of insiders to the detriment of outsiders, typically minority shareholders. Managerial fraud at

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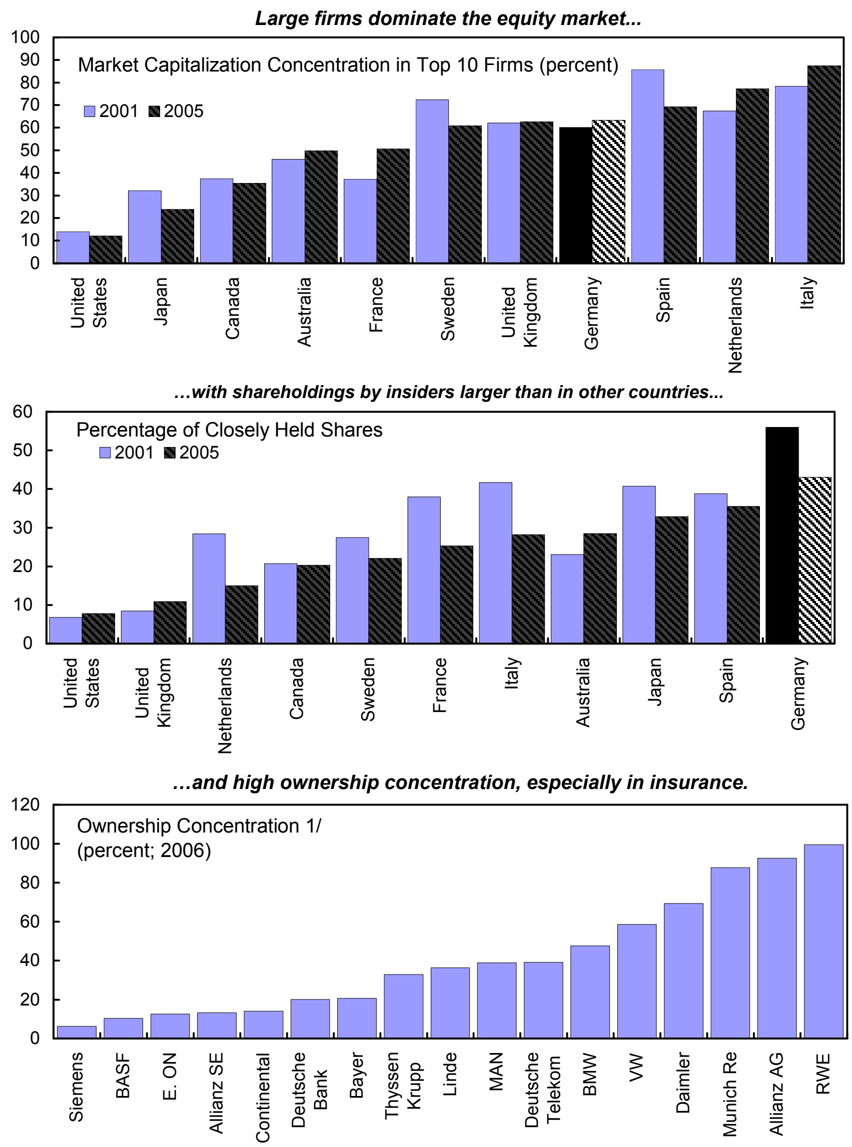
[23] Prepared by Jürgen Odenius.

[24] See Schmidt (2004).

Adelphia, Paramalat, and Tyco, to name only a few of this decade's high-profile corporate scandals, serves to underscore the potential damage from such behavior.[25] High ownership concentration and managerial control by dominant shareholders raise the risk of such behavior.

Figure IV-1. Equity Market Characteristics



Sources: World Bank Financial Sector Development Indicators; Hoppenstedt; and IMF staff calculations.
1/ Defined as shares issued minus dispersed shareholdings.

[25] Adam Smith 1776 discusses the benefits from separation of ownership and control, noting the potential for conflict of interest inherent to this separation.

52. **A proper resolution of these inherent conflicts of interest is of considerable importance for long-term economic prospects, not only in Germany.** Competition in product, service, and capital markets continues to intensify, given the forces of globalization, not only in terms of price but also regarding the suitability of legal, regulatory, and institutional frameworks. According to OECD (2004, p. 30), corporate governance frameworks exert "key importance to overall economic outcomes" and "promote transparent and efficient markets." By affording companies the requisite flexibility, an effective framework helps to enhance productivity, the creation of value added, and, ultimately, the efficiency of the allocation of resources. The German Code of Corporate Governance (GCCG) stresses the need for transparency and clarifies shareholder rights in order to promote the trust of investors and capital market development.

53. **Several broad-based reform initiatives have aimed to address these challenges and buttress the control of outsiders.** This chapter begins by reviewing the corporate governance reforms undertaken over the past 15 years (Section B). The effectiveness of internal control mechanisms, especially the two-tier board structure, and mandatory labor representation are discussed in Section C. Legal mechanisms designed to control self-dealing are reviewed in Section D. The role of external control mechanisms, especially hostile takeovers, in disciplining ineffective insiders is discussed in Section E. Section F draws policy conclusions.

B. Corporate Governance Reform: An Overview

54. **Corporate governance reforms were set in motion in the early 1990s.**[26] Broadly speaking, these reforms served the dual objective of (i) improving the functioning of the traditional insider-controlled corporate governance structure, while (ii) fostering capital market development. Noack and Zetzsche (2005, p. 1039) note that "…recent reforms did not strive for a *dominant* role of a market-based system of corporate control" and pursued a "hybrid system," with corporate governance intended to rely on both insiders and outsiders.

- A series of reforms established basic institutions and regulations to foster capital market development. These reforms included the prohibition of insider trading (1994), the establishment of the Federal Securities Supervisory Office (1995),[27] the mandatory disclosure of stakes that result in substantial voting rights (1995),[28] the

[26] Seibert (2002) provides a comprehensive overview of reforms and their motivation.

[27] Integrated into the Bundesanstalt für Finanzdienstleistungsaufsicht in 2002.

[28] The Securities Trading Act mandates disclosure of stakes resulting in voting rights above 5, 10, 25, 50, and 75 percent.

1998 Antitrust Act, and the usage of International Accounting Standards or US Generally Accepted Accounting Principles by parent companies (1998).[29]

- In parallel, additional reforms aimed to enhance the functioning of the existing corporate governance structure. A milestone among these was the 1998 Law for Reinforcement of Control and Transparency (KonTraG), which aimed to enhance control by the supervisory board (SB) over the management board (MB). The KonTraG also phased out voting caps and shares with multiple voting rights, typically held by insiders to buttress their corporate control.

55. **Capital market reforms intensified this decade amid efforts to bolster investor confidence and a series of European Union (EU) initiatives.** Nowak (2004, p.437) notes: "A number of scandals involving misleading disclosure practices, insider trading, and, in some cases, outright fraud…" served to undermine investor confidence and ultimately led to the closure in 2003 of the Neuer Markt, the exchange listing "new economy" companies. In an attempt to restore confidence, the authorities' implemented a Ten-Step Program during 2003-05. At the core of this program were measures to bolster the protection of minority shareholders by enhancing transparency and disclosure, limiting the scope for market manipulation, and raising the liability of management and the SB. EU initiatives provided an umbrella for many of these reforms.

56. **In addition, the GCCG, has made major strides in creating a better understanding of Germany's governance framework .** The GCCG, first published in 2002 and amended last in 2007, enhances investors' understanding of the complex civil law-based corporate governance framework by setting out key principles in one document. Moreover, the code's "comply-or-explain principle" helps to foster transparency by requiring an explanation from those corporations not complying with the provisions of the code.

C. The Effectiveness of Internal Control Mechanisms

57. **The two-tier board structure and extensive labor representation are defining features of Germany's internal control mechanisms.** Most other European countries have opted for a single-tier board structure—that is a board that combines management and supervisory responsibilities. Denis and McConnell (2003, p. 8) note that "boards of directors in Europe are most often unitary, as in the United States."[30] Moreover, labor representation is most extensive within the EU-25.[31] Both of these features are closely intertwined, given that

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[29] Raising of Equity Relief Act.

[30] However, a two-tier structure is mandatory in some countries other than Germany, including Austria, and optional in others, including France and Finland.

[31] See Taylor (2006).

labor is represented on the SB. Their effectiveness remains an ongoing subject of political and academic debate.

58. **Codetermination allocates half of the SB representation in large companies to labor and the law determines the size of the board.** Germany's system of codetermination entitles labor to half of the SB representation in companies with more than 2,000 employees, and with 1,000 employees in the iron, coal, and steel sector. Mandatory labor representation drops to one-third for companies with employment ranging between 500 and 2,000. The number of SB members ranges from 12 to 21, depending on company capital. In most other EU countries, labor representation is limited to one-third, or fewer board seats.

59. **More than three decades after the broad-based introduction of codetermination, the debate on its effectiveness is far from settled.** As discussed in Hauser-Ditz (2002), labor representatives tend to stress the advantages of creating a wider acceptance of managerial decisions and resolving conflicts better, resulting in fewer labor disputes by international standards. In contrast, capital representatives point to the high costs of codetermination and its adverse effects on Germany's desirability as a business location. Based on a relatively large sample, Stettes (2007) finds that two-thirds of management teams in enterprises with parity in labor representation consider codetermination as exerting a negative effect on Germany's desirability as a business location.

60. **The academic evidence on the impact of codetermination on company performance is inconclusive.** Both Hauser-Ditz (2002) and Stettes (2007) conclude that econometric studies do not deliver clear lessons from the impact assessments of codetermination on enterprise performance. Hopt and Leyens (2004, p. 8) raise additional concerns. They conclude that "…the dividing lines within the supervisory board are detrimental to efficient cooperation with the management board. The basic problems of size (up to 21 members) and the inability of the German system to impose adequate qualification standards are further consequences of codetermination." Tollet (2005) notes that the absence of executives in the SB limits the information flow, restrains informed debates, and results in "ineffective monitoring."

61. **At the same time, the challenges of globalization and European integration have raised questions as to whether the system remains appropriate.** The coalition government recognized these challenges, stating in its 2005 coalition agreement (Bundesregierung, 2005, p. 38) that "…Germany's successful model of co-determination needs to keep pace with global and European challenges." A high-profile commission—consisting of trade unions, employers, and academic experts—was called upon last year to devise reforms; however, deep-rooted disagreements over proposals to scale back labor representation in the SB of large enterprises to one-third ultimately led to the failure of this commission.[32]

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[32] See Tagesschau.de (2007).

62. **The introduction of a European Union-wide framework has provided appreciable flexibility in the corporate governance of public companies.** Since late 2004, public companies operating in at least two EU markets can convert their legal form to a Societas Europea (SE). A conversion to SE status offers significant flexibility in terms of internal controls, including by offering the possibility of moving to a one-tier board, smaller board sizes, and reduced labor participation (see Box 1). At the same time, the costs of converting to SE status are deemed relatively minor.

Box IV-1. The Societas Europea—A Step Towards More Flexible Corporate Governance?

After more than three decades of difficult negotiations, a framework establishing the rules for European public companies—referred to by the Latin term Societas Europea (SE)—became law in the EU in late 2004. SE status allows public companies to operate across the EU and avoid the legal and practical constraints arising from the existence of 27 different national legal frameworks.[1] Key aspects include:

Formation. An SE can be formed by merger, formation of a holding company, formation of a joint subsidiary, or conversion of a public limited company previously formed under national law. However, the company needs to be active in at least two EU countries, and the law, therefore, tends to be relevant for larger public companies only.

Governance. Given the different governance structures across the EU, the SE provides a choice between single- and two-tier board structures. This provides the flexibility of moving to a single-tier board, including for those SEs registered in Germany. The law does not prescribe the size of the boards, and thus leaves room for moving away from the large SBs mandated by law in Germany.[2]

Labor participation is the outcome of negotiations in a special committee comprising management and labor representatives from all countries of operations of the supranational company, including those countries with a tradition of limited labor participation. However, should an agreement not be reached, labor representation, by default, will be in accordance with the most labor-friendly standards prevailing in any of the countries of operation. If, as result of a merger with a foreign company, the share of German labor is less than 25 percent of company-wide labor, the special committee has the power to lower labor representation to below German standards by simple majority vote. A two-thirds majority is required if the share of German labor is higher than 25 percent. Appreciable differences in labor participation across the EU may, therefore, result in labor participation at the SE level that falls short of codetermination requirements.

[1] See Tollet (2005).
[2] See Kallmeyer (2003).

63. **Although it is premature to draw firm conclusions, early indications suggest companies are indeed using the SE statute to enhance the flexibility of internal control mechanisms.** Until September 2007, 33 of the 94 established European companies that adopted SE status were German. [33] Among eight prominent companies—with employment of at least 2,000—three adopted a one-tier board and granted information rights only but no participation rights to labor. Among the five companies that maintained two-tier boards and codetermination, all of them chose small SBs, with a size well below the maximum of 21 members. The conversion of Allianz—a case closely followed given the company's reach—illustrates these findings. Management made it explicit that the conversion was in part motivated by its desire to streamline its governance structure in order to reduce costs, enhance flexibility and strengthen international competitiveness. In agreement with labor, the size of the Allianz SB was halved to 12 members.

German Societas Europea: Changes in Board Structure

SE	Employment	Board Structure	Labor Participation in Supervisory Board	Labor Participation Rights
Allianz	177,000	Two-tier	6 out of 12	Yes
Conrad Electronic	2,314	One-tier	Not applicable	No
Donata Holding	3,922	One-tier	Not applicable	No
Fresenius	100,000	Two-tier	6 out of 12	Yes
MAN Diesel	6,625	Two-tier	5 out of 10	Yes
PCC	3,756	One-tier	Not applicable	No
Porsche Holding	11,500	Two-tier	6 out of 12	Yes
Surteco	2,109	Two-tier	3 out of 9	Yes

Source: ETUI-REHS.

64. **EU initiatives are under way to flank the SE statute with a similar statute for private companies.** As part of its 2003 Action Plan, the EU undertook a feasibility study with respect to the creation of a European Private Company (EPC). Baums (2007) expects that first proposals on the EPC may be presented as early as 2008. However, just as in the protracted negotiations regarding the SE, the issue of labor participation and codetermination may once more prove difficult.

65. **The corporate governance framework would benefit from broader flexibility.** The companies that converted to SE status revealed their preference for more flexibility, especially in regard to the size of the SB and the extent of labor participation. This flexibility, however, is limited to public, international companies. In order to allow a broader market test of the existing corporate governance framework, the flexibility afforded by the SE statute, as a first step, should also be provided to private companies under the EPC.

[33] However, these 33 companies comprise shelf companies and several companies for which information is not readily available; see ETUI-REHS (2007).

Moreover, measures that may limit the legitimate control by shareholders should be avoided, an issue that surfaced in the context of the draft Risk Limitation Law (Box IV-2).

Box IV-2. The Draft Risk Limitation Law

The draft Risk Limitation Law (Risikobegrenzungsgesetz) aims to address the challenges arising from the increasing importance of institutional investors limiting those investor activities with adverse consequences for the economy. The draft law envisions a broadening of acting-in-concert provisions that risks going beyond the prevention of the formation of illegitimate shareholder alliances—such as an alliance formed to take over another company but not declared to the regulator in order to circumvent minimum bid and other legal requirements. The draft thus raises concerns that it may stifle the formation of shareholder alliances formed to pursue legitimate interests, including the approval of, or opposition to, policies proposed by management at shareholder meetings.

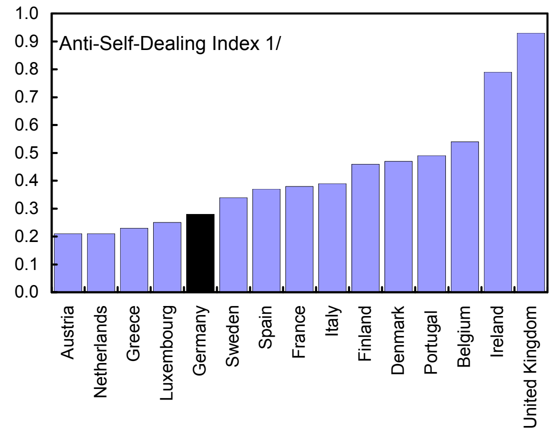
Although a requirement that large holders of stock identify themselves to management is consistent with best international practice, the draft law does not oblige management to distribute this information to all shareholders. The law—expected to be introduced in 2008—risks shifting the balance of power in favor of management to the detriment of shareholders, as concluded by the German Council of Economic Experts in their 2007/08 Annual Report.

D. Conflict of Interest: Self-Dealing

66. **High ownership concentration has long been recognized as giving rise to material conflicts of interest.** The agency problem under concentrated ownership is fundamentally different from that under dispersed ownership. While the primary agency problem for dispersed shareholders is to control powerful management, an additional agency problem arises under concentrated ownership, namely, the control of dominant shareholders and their influence over management. Such a constellation is well known to provide scope for self-dealing, that is asset-diverting transactions. These involve the corporation and its insiders, including often its dominant shareholder who may also be part of management. They are designed to generate private benefits for the insider at the expense of minority shareholders. Notorious examples include above-market compensation for management, asset sales by the corporation at below-market prices, or a dilution of minority stock holdings through mergers.

67. **According to the law, the control of these conflicts relies in large part on the SB.** Given the nature of the agency problem, German corporate law (Konzernrecht) focuses on regulating conflicts between minority and large shareholders. Consistent with the two-tier board structure, control relies on the SB, and the law requires SB approval for specified self-dealing transactions.

68. **However, legal barriers to self-dealing are found to be relatively low in Germany.** In a widely cited comparative study, Djankov, La Porta, Lopez de Silanes, and Shleifer (2005) find that legal protection against self-dealing is low by EU standards.[34] These empirical results are consistent with suggestions in the literature that the SB is ineffective in controlling self-dealing, given the incentives faced by its major constituent groups. Noting banks' and labor's prominent role in the SB, Enriques (2000) states that "as fixed claimants, in fact, banks and employees will not be particularly concerned with managers' diversion of assets, as long as there is no risk of the company defaulting." Baums and Scott (2005) question whether SB members, even if disinterested in relevant transactions, have the requisite independence to effectively control self-dealing, notwithstanding legal provisions intended to guarantee their independence. In cases of concentrated ownership, large shareholders are seen dominating both the MB and SB. In cases of dispersed ownership, management is seen as exercising control over the SB. In either case, the authors see mutual "back-scratching" as diluting SB effectiveness.



1/ Lower index value indicates lower legal barriers to self-dealing.

69. **Involving shareholders could strengthen control over self-dealing.** Enriques and Volpin (2007) call for improved regulation of self-dealing, based on their assessment that little has been done to improve the law in this matter. Both Enriques (2000) and Baums and Scott (2005) note that shareholder involvement in the approval of self-dealing transactions is absent under German law. While an annual report detailing control relations must be produced in order to ensure that transactions take place at arm's-length prices, this report is exclusively shared with the SB, but not with shareholders. However, given the limited effectiveness of the SB, existing laws to deter self-dealing are unlikely to be enforced.[35] To address this enforcement issue, the annual report detailing control relations should be distributed to all shareholders, including minority shareholders.[36]

[34] The methodology underlying these findings, however, is not uncontroversial see Conac et al (2007).

[35] German criminal law imposes sanctions on directors for self-dealing.

[36] The introduction of International Financial Reporting Standards, however, may improve transparency and information flow.

E. External Control Mechanisms: The Market for Corporate Control

70. **External control is an important, complementary mechanism to internal control.** Grossman and Hart provide a theoretical basis for the takeover market's disciplining function in their groundbreaking 1980 article. A potential failure of internal control mechanisms would eventually cause a substantial deviation of a firm's market value from its potential, thereby inviting possible takeover bids. While the literature provides little empirical evidence that the market for corporate control effectively carries out this function, Goergen, Manjon, and Renneboog (2004) nevertheless conclude that the "existence of an active market for corporate control is material."

71. **Germany's market for corporate control is considered small by international standards.**[37] The market was largely dormant prior to the hostile takeover of Mannesmann—a traditional German manufacturer turned into a mobile phone operator—by the British Vodafone in 2000.[38] The dominance of large shareholders is widely seen as a major reason for the virtual absence of takeovers until this decade. In addition, Goergen, Manjon, and Renneboog (2004) attribute this outcome to the prevalence of pyramidal structures and extensive, albeit declining, cross-shareholdings. Schmid and Wahrenburg (2004, p.278) also point to the two-board structure and codetermination as a further obstacle, stating: "To an unwelcome bidder, attaining control over the supervisory board might prove a challenging task. For one thing, shareholders have no power of removing labor representatives."

72. **In response to the arrival of hostile takeovers, parliament adopted a legal framework earlier this decade.** The 2001 takeover law (WpÜG) replaced the earlier voluntary takeover code and combines elements of legislation enacted in the U.K. and U.S.A. starting in the 1960s. Just like the U.K. framework, the German takeover law aims at protecting minority shareholders and stipulates a strict mandatory bid requirement. This requirement aims to provide minority shareholders with an acceptable exit option, as takeovers fundamentally change company policy. More precisely, in transactions that exceed 30 percent of voting rights, the law requires a mandatory offer by the acquiring party to all shareholders. The mandatory bid requirement tends to raise the costs of takeovers and, therefore, is also seen as benefiting management.

73. **In contrast to U.K. law, German law allows for defensive measures to stave off takeovers bids—consistent with the EU framework.** A further important feature of German takeover law is how it resolves the question whether management is granted the right to interfere with hostile takeover bids through defensive measures, or whether

[37] The literature discusses the role of block trades as a potential for corporate control; for an overview, see Goergen et al (2006).

[38] See Schmid and Wahrenburg 2004.

management is obliged to abstain from intervention and retain its so-called neutrality. German takeover legislation grants management the right to interfere with takeover attempts, allowing four different types of defensive measures. While some of these measures require shareholder approval, the MB and SB may also use specified defensive measures without shareholder approval, including the purchase or sale of important assets.[39] The 2001 law is consistent with the EU Takeover Directive that came into force in 2004 after some 30 years of protracted negotiations.

74. **Creating a level playing field in the market for corporate control requires restoring management neutrality.** There is broad-based agreement in the literature that the takeover law falls short of creating a level playing field. Both the mandatory bid requirement and the appreciable scope granted to management to engage in defensive measures are seen as raising the costs of a takeover. Against this background, Baum (2006) concludes: "Together with Austria, the German takeover regime is probably the most intensely regulated takeover law worldwide." In the words of Baums and Scott (2005, p. 22) the decision to give the MB power to use defensive measures without SB approval "…has entrusted the wrong people with the decision whether the market for corporate control should operate." Enhancing the effectiveness of the market for external control, and especially involuntary takeovers, could serve as a major step toward enhancing corporate governance, especially given the inherent weakness of internal control mechanisms.

F. Conclusions

75. **Germany's traditionally insider-dominated corporate governance system has undergone substantial reforms since the early 1990s.** Besides the improved functioning of insider-controlled corporate governance structures, these reforms led to a pronounced strengthening of control by outsiders.

76. **Nevertheless, consideration should be given to further enhancing the effectiveness of this "hybrid" framework in three core areas:**

- **First, internal control mechanisms would gain effectiveness from a more extensive introduction of flexibility.** Germany's legally mandated two-tier board structure, its large SBs, and high labor representation remain a topic of continued political and academic controversy. At the same time, early experiences with the introduction of the SEs illustrate that public companies are "voting by their feet," using the SE statute to render their corporate governance structures more flexible. Broadly speaking, they are reducing the size of their SBs or, adopting single-tier

[39] Unlike in the US, the use of poison pills is illegal and, in case of a takeover attempt, management is not allowed to extend rights to existing shareholder to acquire stock at a deep discount. However, Gordon (2002) suggests that the absence of poison pills may inflict more damage on shareholders than their use, since firms may instead resort to irreversible, value-decreasing measures.

boards, often trimming labor involvement. Given this evidence, consideration should be given to broadening the “market test” of the corporate governance framework—in a first step—by extending the flexibility afforded under the SE statute to private companies.

- **Second, the problem of self-dealing remains a material challenge to effective internal control—aggravated by high ownership concentration.** The principal-agent problem under concentrated ownership is fundamentally different from that under dispersed ownership. While the primary agency problem for dispersed shareholders is to control powerful management, an additional agency problem arises under concentrated ownership, namely, the control of dominant shareholders and their influence over management. Such a constellation is well known to provide scope for self-dealing, that is, asset-diverting transactions. Consistent with the two-tier board structure, the control of these transactions primarily relies on the SB. However, empirical results illustrate that legal barriers to self-dealing are low by international standards, mainly because the incentives faced by some of the SB’s constituent groups, especially lenders and labor, dilute control. Making control more effective requires involving all shareholders in order to resolve the enforcement problem resulting from the SB’s limited efficacy. In particular, the practice of providing an annual report detailing self-dealing transactions exclusively to the SB should be discontinued; instead, the report should be provided to all shareholders.

- **Finally, given these inherent weaknesses of internal control, external control needs to be bolstered.** The market for corporate control continues to be stifled by legal barriers, including measures allowing incumbent management to take defensive action to stave off involuntary takeover bids. In light of these pronounced weaknesses in internal control, the effectiveness of external control needs to be strengthened to raise the efficiency of corporate and, thereby, economy-wide resource allocation. Striking defensive measures from the German takeover law would be a major step in this direction.

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