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McKinsey Germany

Welcome to the volatile world

Challenges for the German economy emerging from fundamental market changes

Summary of findings

Contact:
Welcome to the volatile world
c/o McKinsey & Company
Taunustor 2
60311 Frankfurt
Germany

Preface

Two years ago within the scope of a study entitled "Germany 2020. Future perspectives for the German economy," we investigated which growth opportunities Germany's key industries have and how the German economy could become more dynamic. Changes over the past 18 months have posed a series of additional questions.

Ones like: Should Germany reduce the emphasis on exports in its economic model and concentrate more on domestic demand? How resilient is the German industry when facing tremors and repercussions in the closely meshed global economy? But also: Which new opportunities emerge from a period of radical change and enduring high volatility? Is it still possible to predict economic developments with any precision – and what are the consequences for business decisions?

Greater uncertainty results in daunting tasks: for companies, in their strategic planning; and for politics, in shaping the regulatory framework. Based on a balanced orientation toward the core challenges of growth, resilience, and renewal, the German economy can profit from a wealth of opportunities in the volatile world.

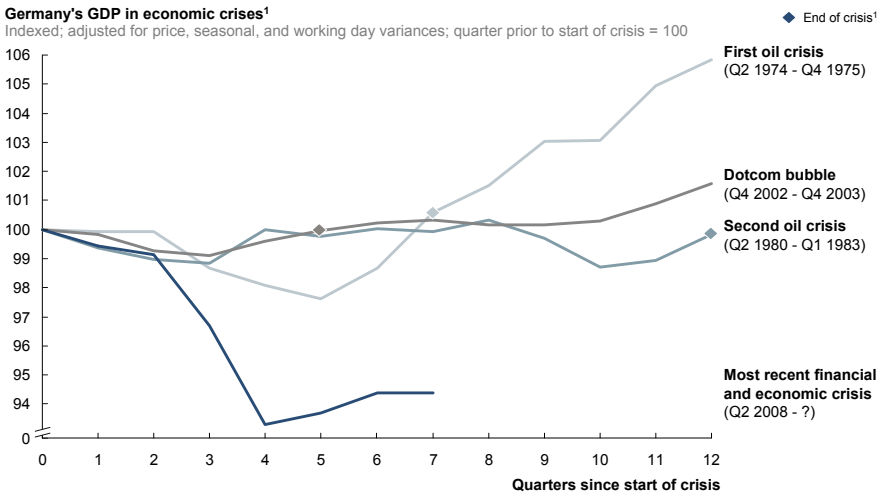
With this study, we want to map out the volatile world, revealing not only its risks but foremost the opportunities it brings – while sketching out ways to capture these.

This document is the summary of a 140-page report of the overall study – the full report (in the German language) can be ordered via McKinsey Germany's homepage (www.mckinsey.de).

Welcome to the volatile world. Challenges for the German economy emerging from fundamental market changes

The global financial and economic crisis over the past two years hit Germany especially hard. From the last quarter before the recession ensued (the first quarter of 2008), Germany's gross domestic product sank by 6.7 percent over the four subsequent quarters (Exhibit 1). These figures show that the German economic downturn was more severe than ever in the history of the Federal Republic. It was simultaneously more drastic than in any other larger European country and in the US where the damage left by the crisis was a downturn of "only" 3.8 percent. A result of the strong focus on exports, the impact of the crisis on Germany's manufacturing industry has been dramatic: between February 2008 and April 2009 alone, industry production plummeted by almost 25 percent.

Germany is experiencing the most severe economic crisis since 1949



1 Definition for historical economic crises: start of crisis = first quarter of at least two consecutive quarters with a decline in GDP; end of crisis = second quarter of at least two quarters with GDP growth

Exhibit 1 SOURCE: German Federal Statistics Office; McKinsey

In contrast, the impact on Germany's employment rate has hardly been noticeable to date. While the statistics-based unemployment reported from the beginning of 2008 to the end of 2009 climbed 5.0 percentage points in the US, Germany's unemployment rate remained virtually unchanged – this, despite the country's sharper decline in GDP. Such moderate impact is a direct result of cutting working hours overall and other stabilizers like reducing overtime accumulated and decreasing negotiated weekly working time.

Still, the crisis did have consequences in the form of diminishing productivity, thus long-term competitiveness. At pre-crisis productivity levels with no changes to overall working time, 2.2 million fewer employees would have been sufficient to achieve 2009's economic output.

The economic and psychological aftershocks of the crisis run so deep that picking up pre-crisis momentum is unlikely. This raises a series of questions:

- How will the economic environment for German companies develop?
- What will future success factors be – both for the German economic model and for individual companies?
- How high is growth potential in Germany's key industries and how resilient are they?

1. Taking action in a volatile business environment

Decision makers in both the private and the public sector should expect that uncertainty and volatility will become constant companions – the range of fluctuation for relevant parameters will continue to broaden.

The McKinsey Global Institute has identified 32 financial crises in the period following the Second World War. No other crisis resulted in such extreme fluctuations in almost all core economic and financial indicators as did this most recent one (Exhibit 2).

In 2008/09, the relevant core parameters for Germany's real and financial economies showed high fluctuation

Volatility heat map
Index (100 = average standard deviations per core parameters of the 11 two-year intervals from 1986 - 2009, excluding the 1990/91 interval)[1]

Above average (> 125% of index value)
Average
Below average (< 75% of index value)

Real economy (Germany)	Basic volatility[2] 1986 - 2009	1986 - 87	1988 - 89	1992 - 93	1994 - 95	1996 - 97	1998 - 99	2000 - 01	2002 - 03	2004 - 05	2006 - 07	2008 - 09
GDP	0.8 % points	1.5	0.8	0.9	0.5	0.8	0.7	0.6	0.4	0.3	0.4	1.8
Gross investments in production assets	2.4 % points	4.5	2.4	1.9	2.1	4.0	1.4	1.4	1.0	1.5	2.4	3.5
Exports	2.5 % points	1.7	4.3	2.8	1.7	1.4	2.5	2.2	1.6	2.1	2.3	5.1
People employed	0.2 % points	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.2
Production in manufacturing	1.6 % points	1.4	0.5	1.9	1.6	0.5	1.1	1.7	1.1	0.9	0.9	5.9
Financial economy												
Oil and gas price index	4.2 % points	5.7	2.6	3.1	2.3	2.8	4.7	3.5	3.8	3.9	4.8	8.5
Metals and mining index	6.1 % points	6.7	5.9	5.2	3.7	4.3	6.2	5.0	5.7	5.3	5.9	13.4
DAX 30	5.0 % points	7.3	4.1	3.9	2.9	3.8	6.3	6.1	7.2	2.8	3.4	6.9
Return on government bonds[3]	0.4 % points	0.4	0.3	0.8	0.5	0.4	0.5	0.3	0.4	0.4	0.3	0.5
USD/EUR exchange rate[4]	0.08 USD/EUR	0.11	0.06	0.06	0.10	0.09	0.05	0.04	0.11	0.05	0.07	0.10

1 For every two-year interval, the standard deviation of parameter growth rates is calculated (exception: for government bonds and exchange rate, absolute values are the basis for calculation); quarterly values used for the real economy and monthly values for the financial economy
2 Basic volatility is the average of standard deviations from individual two-year intervals
3 Term of 9 to 10 years, standard deviation of the absolute change
4 Based on the German mark prior to 1999, converted using the set exchange rate of DM 1.95583 = EUR 1; standard deviation of the absolute change

SOURCE: ECB; German Federal Statistics Office; Thomson Reuters Datastream; McKinsey

Exhibit 2

Globalization, deregulation, and accelerating communication have forged ever closer ties in the global economic system, dramatically speeding up market player response times. Simultaneously, crisis-dampening factors – like domestic markets and local capital markets – have declined in significance. The numerous layered, overlapping, and often divergent powers with global impact thus suggest that volatility will remain an immanent component of the global economic system in the years to come. Because:

- *Local crises can escalate globally.* The dominant economies are intermeshed via supply chains and specialization like never before. Isolated crisis hot spots can hardly be contained; these spread rapidly to other industries and economic regions.

- *Higher liquidity quickly leads to overheating.* The departure of central banks from a low-interest policy is nowhere in sight. This could only happen gradually anyway. As a consequence, investors use the cheap money to chase profitable ventures, further heating up the economy and forming bubbles in specific regions or investment classes.

- *Even small events change the risk assessment of market players.* Discussions on the appropriate risk assessment of various investment classes are proliferating. Even what could be considered insignificant information quickly leads to reassessment of risks and reallocation among regions and investment classes under certain circumstances.

- *Banks can no longer absorb all fluctuations.* Cyclical variances could more quickly destabilize those banks with a weakened equity capital base. If government bonds were to drop in value or if valuation bubbles were to burst, this would force banks into further write-downs.

Despite increased volatility, a cyclical recovery from the most recent crisis is possible – many lead indicators currently point toward this development. Even if the dynamics of recovery were slightly weaker at the end of 2009, the industry's order intake this past December, for example, did lie around 17 percent above the lowest values in February 2009 and even slightly above levels in the year prior. Economic researchers, policymakers, and institutions explicitly or implicitly expect economic performance in Germany to once again reach GDP levels of the first six months of 2008 some time during 2012 or at the beginning of 2013 at the latest. Still, the financial and economic crisis has uncovered latent risks and produced new ones that could again become virulent at any time. Thus, a period of extreme fluctuations reaching critical peaks could be just as likely as a robust upswing within a cyclical recovery – volatility becomes normalcy; precise forecasts become an impossibility (Exhibit 3).

The German economy is on the threshold of a development corridor – precise forecasts are no longer possible

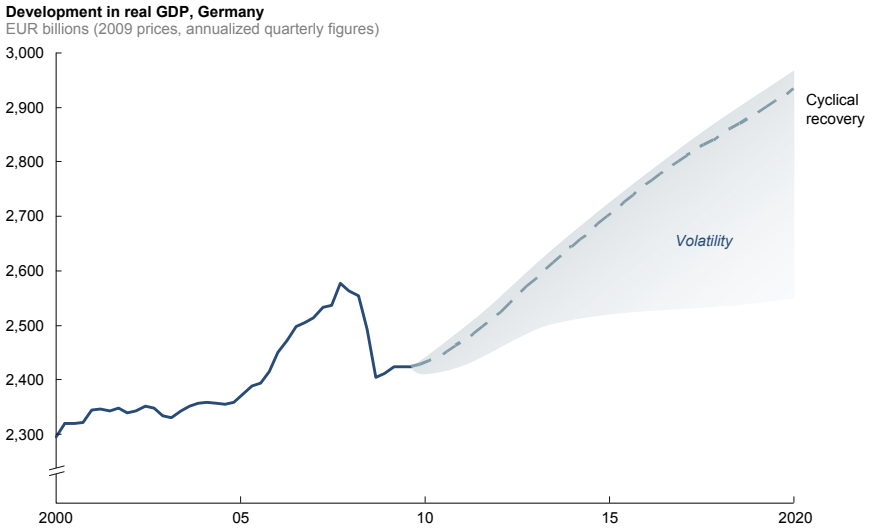


Exhibit 3 SOURCE: Oxford Economics; McKinsey

Various sources of risk determine the breadth of this developmental corridor – whether and how strongly the global economy will actually be impacted remains a matter of speculation; however, it would be careless to dismiss these as improbable tail risks and therefore negligible.

- *Financial market risk.* Despite extensive state aid, many banks find themselves strained by their weakened equity capital base coupled with potential global write-downs amounting to EUR 1 trillion, around one-third of this in the eurozone. Additional risks lie in commercial credit and real estate, and particularly in government bonds. To date, any compelling new regulation of financial markets has yet to take on concrete form. At the same time, high liquidity in markets can lead to price bubbles. Should these burst, this could rock the foundations of any faith in economic recovery.

- *Debt risk.* The debt levels of banks, companies, private households, and governments remain high internationally. The deleveraging needed will take a great deal of time and could destabilize economic development. Even the insolvency of a eurozone country has now become conceivable, potentially triggering unpredictable chain reactions.

- *Real economy risk.* After initial recovery, indicators like order intake or consumer demand develop clear peaks and valleys. Further risks stemming from the real economy could be a rise in oil prices to over USD 100 per barrel, a significant decline in US consumer demand, or a sharp drop in China's growth.

- *Geopolitical risk.* The current crisis has once again fueled demands for protectionist policies. If such pleas to protect national industries were to gain broad acceptance, this would diminish growth outlooks for all countries for years to come. Compounding this, multilateral cooperation among countries, particularly in economic issues, quickly reaches its limits, as negotiations for a new climate change agreement in Copenhagen demonstrated. Isolationism and unilateral solutions skew the competitive playing field and can destabilize economic development.

Based on the risks and destabilizing factors described, linear development over the coming years seems unlikely. Decision makers in both the private and the public sector must begin addressing the challenges now to prepare the German economy for the volatile world. A triad results as the maxim for taking action: reinforce growth, build resilience, and drive renewal.

2. The three keys to success: growth, resilience, and renewal

Germany's answer to the crisis cannot be the departure from a successful export orientation and above-average industrialization. Given these strengths, radically redefining the current economic model is not the solution. Instead, Germany will need to develop this model further. Growth, resilience, and renewal make up the triad of key challenges that the country will face in the coming years.

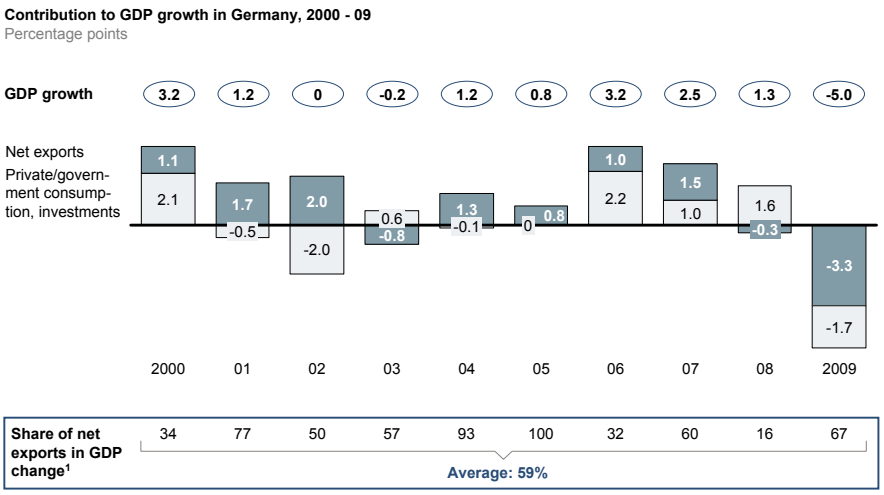
Reinforce growth. Growth remains an imperative for Germany

- To halt the gradual economic decline of society's middle classes and ensure the sustainability of social systems

- To prevent or at least mitigate a decline in employment rates
- To pay back enormous government debt, and
- To build up assets, and by doing so, establish a macroeconomic cushion to dampen the demographic effects of an aging population.

The economic model in which Germany is rooted is fundamentally attractive – with no alternative. The economic structure characterized by a high-performing industrial core with its strong export orientation best reflects Germany's strengths. As such, it offers favorable prerequisites for future growth. After all, domestic industry contributed around 24 percent to Germany's gross domestic product in 2008, a figure around twice as high as in France. Almost 60 percent of the GDP development over the past decade was driven by the trade surplus (Exhibit 4). Moreover, Germany's strength in export does not stem from any artificial government intervention; instead, it results from international distribution of work and from global demand.

Over the past decade, around 60% of GDP growth has been driven by net exports



1 Percent share of net exports in total growth contributions from net exports and domestic components (private consumption, government consumption, investments); 2002 example: sum of growth contributions equals 4.0, resulting in a net exports share of 50%

Exhibit 4 SOURCE: German Federal Statistics Office (VGR, status: February 2010); McKinsey

The next economic upturn should build on structures already in place; export opportunities will continue to mean substantial growth potential for German companies, particularly in BRIC countries (Brazil, Russia, India, and China), where Germany's production portfolio is well aligned with local demand. The capital that results from current account surpluses should then flow into participation in foreign production assets in order to expand the income base for Germany's older population.

Build resilience. Although Germany's existing economic model remains without any serious alternative, exports alone will prove insufficient to induce the growth required, at least over the next two years. The demand for capital-intensive goods, which account for

half of Germany's exports, will likely build only gradually. Since the crisis hit only shortly after a phase of high investment levels, existing equipment will probably remain underutilized for some time to come.

For this reason, export-oriented companies must confront the intensifying global competition with heightened resilience. Recipes for success in accomplishing this are already widely known: a low break-even point, high operational flexibility, adequate capitalization, economically stable liabilities, while hedging against exchange rate risks by also producing in local markets (real hedging), diversifying within core business, and developing and retaining a flexible pool of qualified employees.

The question of resilience also presents itself when considering the dependence of the economic model on industrial exports. Sustainably higher private consumption as an added growth engine for Germany's economy and across Europe would definitely be desirable, but hardly seems realistic under foreseeable conditions. Consumer spending in Germany has only developed very hesitantly for quite some time: from 2000 to 2008, it grew by a mere 0.4 percent p.a. on average.

Expanding services shows greater promise – a larger services sector could compensate for fluctuations and downturns in the industrial core. To date, however, the pace of this expansion in Germany has been slower than in the US or in the UK, for example. In many manufacturing sectors today, services are already closely linked to the actual "hardware" – and they are far less vulnerable to fluctuations. Expanding these could increase the resilience of manufacturing companies considerably. This applies to maintenance and repair, assembly and start of operations, training, planning, forecasting, advising, and even financing. A developmental backlog can also be found in the traditional services sectors, especially in the information and communications technologies. Purely local services targeting individuals (e.g., the hospitality sector, education, healthcare, household-related services) are particularly well suited as growth engines on the labor market – even in lower income brackets – which could significantly boost social welfare. Fostering these types of services would directly result in higher consumer demand.

Beyond this, revising financial markets regulation is an urgent step in preventing crises and critical developments from spilling over into the real economy ever again. Regulatory efforts already underway can be assigned to three categories, each differing significantly in its degree of impact:

- *Globally coordinated efforts to align financial markets regulation* can sustainably stabilize the banking system. Actions in this area include improving banks' risk-bearing capacity based on new liquidity and equity capital requirements, limiting risk origination (for example, by standardizing over-the-counter trading practices), preventing potential risk from spreading (for example, by requiring banks to draft living wills), and better protecting private investors from unforeseeable risks.

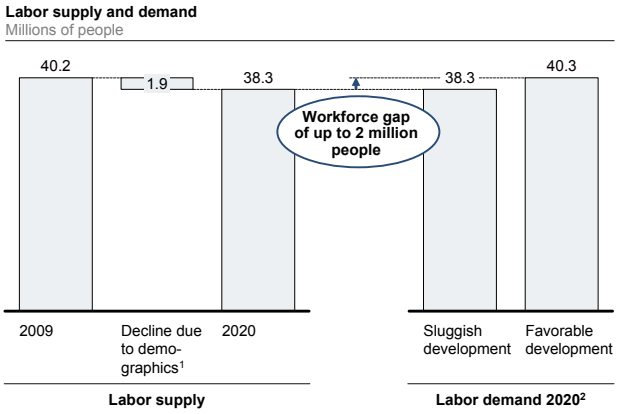
- *Obliging banks to participate in the costs of the crisis* is understandable from a political perspective. However, not all of the approaches suggested would contribute to a more stable financial system. Proposals currently under discussion include a value-added tax on financial transactions (such as the Tobin tax) and higher taxes on bonuses paid to bank employees.

- *Structural intervention in the financial sector* in individual nations harbors the danger that room for additional arbitrage could emerge. In this way, differing regulations would contribute to global instability. Examples of such interventions are the possible ban on proprietary trading for banks in the US or stand-alone capital adequacy and liquidity requirements for domestic branches of international banks in the UK.

Drive renewal. Overcoming the immediate consequences of the crisis is urgent, but this will not suffice to secure long-term viability for Germany's overall economy. Beyond managing the fallout from the crisis, Germany needs lasting growth dynamics. Setting these in motion requires two factors: renewal capability and renewal willingness.

Renewal capability stems foremost from a talent base with superior knowledge and skills but also from an innovative infrastructure. As a country poor in natural resources, it becomes all the more imperative for Germany to focus on ensuring that sufficient qualified human resources are available. What is already apparent is that a gap of up to 2 million employees will emerge by 2020 (Exhibit 5) – academics will account for one-third to one-half of the overall deficit.

In 2020, Germany will need up to 2 million more people in its workforce



1 Assumptions: population development according to variant 2-W1 of Germany's Federal Statistics Office; constant participation and unemployment rates up to 2020, taking the rise in standard retirement age into account
2 Labor demand estimated based on different scenarios for developments in GDP and productivity. In the best case, GDP development lies somewhat above cyclical recovery. In the worst case, pre-crisis GDP levels are hardly reached even by 2020

Exhibit 5 SOURCE: Eurostat; Oxford Economics; German Federal Statistics Office; McKinsey

Were the employment rate to climb by 5 percentage points, this would be more than sufficient to close the gap. The decisive factor: qualification levels. To ensure that supply is aligned with demand in Germany's future workforce, the country will need more outstanding academics, higher standards throughout the education system, and not lastly a comprehensive reform of the German education system itself. Prerequisites needed to spur these developments include a systematic review of school and pupil performance, better early childhood education, a later decision on the course of secondary education, and more autonomy and accountability for educational institutions. Possibly the most

important factor overall is a new attitude regarding the value of education: society must finally grasp education as an investment in the future.

Infrastructure is the second source of renewal capability. With other countries amplifying their infrastructure investments – and not only in the context of economic stimulus programs – Germany's historical advantages of a superior infrastructure threaten to dwindle. Opportunities for Germany to regain if not expand its lead include high-speed broadband networks, smart grids, and traffic management systems for roads and rail. Given strained government budgets, however, classic investment programs will likely have to give way to identifying creative approaches that minimize government funding, such as launching innovative flagship projects. What will also contribute is regulation that promotes private investment and enables companies to capitalize on consumer willingness to pay for infrastructure enhancements.

Renewal willingness as the second prerequisite for dynamic growth manifests itself in a mindset among businesses and society as a whole that prioritizes ongoing renewal over conserving the status quo at almost any price. Up to now, German businesses, society, and politics have sooner been structurally conservative in international comparison. More business angel financing, greater and more rapid commercialization of cutting-edge technologies, and clear prioritization of new growth areas in companies would accelerate economic renewal. Rather than maintaining the status quo, Germany needs a future-oriented, dynamic understanding of social security. Focusing social security on life's truly serious risks would facilitate the changes needed, while fueling successful renewal.

Of course, the government does play a key role in overcoming the consequences of the crisis and putting the prerequisites for greater economic and social dynamics in place. This, however, is no justification for far more proactive government intervention or restrictive industrial policy. Instead, the state should concentrate on those areas in which its efforts are decisive – as an enabler for sustainable economic dynamics. Growth itself originates first and foremost in companies.

3. Market opportunities and challenges for Germany's key industries

Growth in harmony with resilience and renewal is thus an imperative for the German economy. But simultaneously, another question arises in individual sectors given the huge challenges the crisis has brought: where can this future growth come from?

The slowdown in the overall economy is not affecting all sectors equally. As before, there are promising bright spots in Germany's future. It is precisely volatility that drives continual change, making it a source of innovation and progress. Fertile areas for economic growth emerge from three key change drivers: sociodemographic change, limited natural resources together with climate change, and the proliferation of technology and knowledge. Structured into seven categories, we present 50 exemplary growth areas (Exhibit 6). Just how extensive and profitable these will be in the future is difficult to tell – but the sheer numbers and diversity alone make it clear that German companies have no lack of opportunities for future growth.

50 examples of areas for growth

Resource efficiency

1. Hybrid vehicles
2. Optimized combustion engines
3. Electric cars and plug-in hybrid vehicles
4. Train efficiency systems
5. Ship propulsion
6. Energy-efficient heating systems
7. Decentralized combined heat and power
8. Building insulation
9. Energy-efficient white goods
10. Energy-efficient lighting
11. Wind energy
12. Solar energy
13. Biomass/biogas
14. Renewable energies project development
15. Water technologies
16. Agricultural technologies

Infrastructure

17. Local public transit
18. High-speed rail
19. Road traffic – toll systems
20. Road traffic – recharging battery-powered vehicles
21. Airport construction
22. Aerospace technology
23. Modernization to boost power plant performance
24. Expansion of power grids

Security

25. Protection of infrastructure for passenger and freight traffic
26. Prevention of conflict in cyber-space
27. Domestic intelligence
28. Identification and authentication
29. Network/data security

Financial stability

30. Centralized markets
31. Objective financial advising
32. Risk management
33. Dissaving (decumulation)

Healthcare

34. Wellness
35. Fitness
36. Treatment of chronic diseases
37. Nursing care
38. Assisted living
39. Telemedicine and e-health
40. Data exchange across sectors
41. Expansion of private hospital care
42. International knowledge transfer in healthcare systems
43. Medical technology

Digital world

44. Connected home
45. Interactive entertainment
46. Personal gadgets
47. Software as a service
48. Internet of things
49. E-government
50. Telecommunications networks

Additionally: new consumers

Exhibit 6 SOURCE: McKinsey

- *Resource efficiency.* The EU's ambitious 20-20-20 target – to reduce CO_2 emissions to 20 percent below 1990 levels by 2020, to achieve a 20 percent share of renewable energies in power generation, and simultaneously boost energy efficiency by 20 percent – results in numerous sources of growth. Beyond CO_2, innovative ideas on how to better use basic resources like water and agricultural land also hold great promise.

- *Infrastructure.* Modernizing the existing infrastructure tops the agenda in industrial countries. Emerging markets, however, need to rapidly expand their infrastructure – for traffic and energy for example – in order to keep pace with their own growth.

- *Security.* The demand for security products and services shows a notable rise. While the increasingly pivotal significance of IT systems for companies and public authorities accounts for part of this, the global terrorist threat is another core factor. Emerging growth areas range from network and data security all the way to passenger and freight traffic surveillance.

- *Financial stability.* Private and institutional investors must now deal with greater volatility and new risks. Therefore, creating markets that generate more transparency and security in financial transactions or efforts like building up professional risk management are becoming clear fields for growth.

- *Healthcare.* The global population is growing more affluent and living longer. Worldwide, people spend an ever greater share of their income and assets on healthcare. Coupled with ongoing advances in medicine, this results in a large future market.

- *Digital world.* Digitization is one of the past decade's most substantial developments. It increasingly permeates everyday life, and with this, it enables new expansion opportunities from interactive entertainment all the way to components within the "connected home" concept.

- *New consumers.* The consumer landscape will change considerably over the coming decades. Beginning in Western industrial nations with trends toward sustainability, ecology, and convenience, new demand structures increasingly characterize consumer needs. Future shifts both in consumer preferences, purchasing power, and shopping behavior require prompt alignments in corporate strategy. If both consumer goods manufacturing and retail react appropriately, the entire economy could benefit.

Setting the course for future growth in new areas and simultaneously overcoming the current crisis – this is the dual challenge for companies in Germany's key industries. The objective is to ensure that industry players and business models can meet the future head-on with the highly diverse areas of emphasis and differentiated timing. Germany's banking sector, for example, will need to rapidly close an acute gap in equity capital of EUR 110 billion, whereas Germany's energy sector requires more longer-term direction setting.

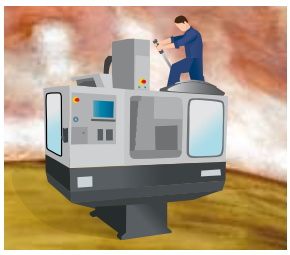
Automotive

For Germany's automotive industry the challenge is two-fold: navigating both the economic crisis and technological discontinuities on the way from internal combustion engines to electromobility. The crisis alone left German automotive manufacturers with a cumulative EBIT burden up to 2020 of EUR 70 to 80 billion; the majority of this will have already impacted the bottom line by 2012. It will cost automakers in Germany an additional EUR 110 to 120 billion to fulfill the obligatory CO_2 targets. Historically unique, this dual burden will accelerate structural change in Germany's automotive sector. Up to 2020, it is unlikely that vehicle production will exceed pre-crisis levels. Productivity gains will mean fewer jobs in their existing forms. But at the same time, new jobs will emerge – jobs that require new qualifications resulting directly from technological discontinuities, primarily those associated with electromobility.

Germany's automotive manufacturers can look ahead to global competition in the coming years with optimism. Their strengths in technology, quality, brand image, and market position will enable them to profit from the recovery in the global automotive market. They can expect growth of 30 percent in their worldwide sales figures up to 2020. To achieve this, the German automotive industry needs to expand market shares primarily in high-growth regions such as the BRIC countries. Among other approaches, they should increasingly develop vehicles in the lower price segment to mirror the primary demand in these regions.

Despite the consequences of the crisis, manufacturers and their suppliers should not curb their R&D investments. Precisely now is the time to anchor the innovation leadership of German companies, especially in the areas of infotainment, connectivity, and safety. German manufacturers can even further expand on their leading position in optimized internal combustion engines – the drive technology that will remain dominant in the foreseeable future. Decisive for the development of automotive production in Germany will, however, be leading the field in electric powertrains. These new components alone will provide German automotive manufacturers and their suppliers with global growth potential of around EUR 60 billion p.a. up to 2020 (already adjusted for cannibalization).

Investment goods



As heterogeneous as the investment goods sector is, so is the impact the crisis left on it. While revenues remained stable even through the crisis for IT services and software companies due to long-term service contracts, classic German investment goods industries like mechanical engineering and electrical systems faced much greater challenges. Hardest hit were the semiconductor, network infrastructure, and enterprise computing subsectors – much smaller subsectors in Germany, which have already been characterized by consolidation for several years.

Continued cost pressure in the subsectors under threat, greater production offshoring to US-dollar-based countries, and a credit crunch in Germany's SME segment could amplify the already intense pressure on employment levels. Over 350,000 jobs are in danger. Still, prophecies of doom are inappropriate, since this industry has proven its resilience and innovative strength in former crises. New growth opportunities emerge in areas like cleantech, where the German industry already generates 10 percent of global value creation, or in cross-sector cooperation at the interfaces between industries and technology – for example, in electromobility. Trigger projects like building a green factory or a smart grid in a pilot region could help bring companies from different sectors together, creating win-win situations.

To be able to withstand cyclical economic fluctuations more robustly, the industry should also complement or even replace its traditional investment-oriented business model with one based on value creation – for example, with a stronger focus on service and selling the value proposition "availability" rather than just the investment good itself.

Transport and logistics

In the procyclical transportation and logistics industry, volumes in Germany dropped by 13 percent in the trough of the crisis. For international transports, the decline was even sharper at around 20 percent. At the same time, freight rates plummeted to in part irrationally low levels. As a result, some subsectors saw EBIT margins as low as minus 20 percent in 2009. Should a global recovery ensue, many subsectors that were hit particularly hard will, however, also rapidly recover. In container and bulk shipping, in port operations, and in international freight forwarding, 2012 volumes will likely exceed pre-crisis volumes significantly.

Still, some sectors will face structural changes. Digitization will fundamentally impact postal communication, for example. In container shipping, overcapacities will continue to burden liners, shipowners, and banks. The financing of vessels through limited partnerships (e.g., based on the German KG model) has become obsolete in its current form, and overcoming the liabilities and risks resulting from such structures will require a major feat. In the process, it is important to prevent procyclical and destabilizing losses. This

can be achieved through far-sighted individual actions or via a collective entity able to own and manage vessels in financial distress.

Stop-gap and crisis management activities alone, however, will prove insufficient. The transport industry continually generates efficiency gains that it passes on to shippers – particularly during recessions – in the form of lower freight rates. A full restoration of freight rates (at least in real terms) is thus unlikely. The introduction of new equipment – larger ships for example – is one major but not the sole source of additional efficiency gains. Cooperation such as industry platforms in hospital logistics can also increase efficiency. Other growth areas include logistics solutions focusing on simplicity and convenience like e-fulfillment for retailers. Beyond the sector's participation in the continually growing global trade, these segments offer significant opportunities that will help the transport and logistics industry return to a growth path over the medium term.

Chemicals

The success of Germany's chemicals industry over the years was rooted in innovation and the ability to offer attractive solutions based on superior knowledge well beyond the chemicals industry itself. This made it possible to offset the disadvantages of high labor costs and a lack of domestic raw materials.

Despite these success stories, the threat of portions of this industry migrating elsewhere is real, particularly for personnel-intensive chemicals segments and areas of production requiring proximity to raw materials. In specialty chemicals, the threat of migration – often toward Asia – is acute for around 40 percent of gross production. In domestic basic and plastics chemicals, growing competition (in particular from the Middle East) intensifies the threat of overcapacities that could push down prices permanently. At least over the short term, a larger-scale migration out of Europe remains unlikely, though, because high closure costs and the loss of residual margins often make relocating production capacities unprofitable. Beyond this, the majority of European plants are in clustered locations that cover several stages in the value chain, enabling cross-subsidies for the less profitable primary production. Over the long term, however, the industry will need to face the issue of relocation and proactively shed unprofitable segments.

The German chemicals industry is well advised to continue focusing on its innovative strength. To achieve a leading position in promising future technologies as well, it should focus on core fields of innovation such as photovoltaic chemicals, chemicals for the production of energy storage media, composite materials for lightweight structural components, and biodegradable plastics.

Steel

Declining demand and strong global competition have taken a substantial toll on the German steel industry. Compared with 2007, steel demand across the EU plus Norway, Switzerland, and Iceland (EU-27 + 3) has plummeted by a third to around 135 million tons p.a. The market will certainly recover, but sooner to a figure of 175 million tons p.a. than 2007's all-time high of 205 million tons. For the time being, steel producers in EU 27 + 3 countries will continue to grapple with high levels of underutilized capacity. At the same time, numerous competitors will open up sites in low-cost regions like Brazil.

The pre-crisis boom and the crisis itself have made clear just how dependent steel producers are on raw materials suppliers. In year one after the crisis, the three biggest iron ore suppliers that deliver over two-thirds of the relevant seaborne iron ore on the market will assert significant price hikes. As such, price levels will be almost as high as during the boom even though steel prices will have yet to recover.

Further industry consolidation would enable more efficient restructuring and help European companies regain competitiveness. Independent of such industry-wide developments, however, it lies with individual companies to increase their own competitive strength based on further productivity gains and improved energy efficiency. Focusing more on high-quality products, expanding technical service, and speeding up delivery processes can also build stronger customer relationships. Finally, steel manufacturers should make the effort to lessen their competitive disadvantages in the area of raw materials. Two potential approaches are sourcing raw materials from suppliers other than the market leaders or developing and participating in mining projects.

Energy

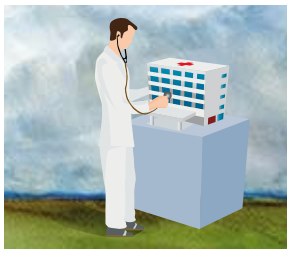
Germany's energy sector came through the crisis year of 2009 virtually unscathed. A drop in industry demand of around 10 percent drove power consumption in Germany down for the first time in 15 years by around 5 percent.

Two major trends will alter the industry over the medium term: increasing regulatory pressure will result in lower profits and more intense competition, and the trend toward renewable energies will force companies to fundamentally revamp their generation portfolios. Germany's energy suppliers are already addressing these trends in a number of ways: whether reducing their CO_2 risk by hedging transactions, by investing in carbon-free power plant performance, by driving down grid costs, or even by selling grids entirely.

The trend toward renewable energies and the resulting investments (EUR 60 to 80 billion by 2020) will likely change the industry landscape permanently. To secure their share in the industry's profit pool, the "big four" power suppliers would need to increase their share in renewable energies from currently 10 percent to around 50 percent. Whether this is possible remains in question given the tense financing climate after the most recent wave of takeovers coupled with the lower profits expected from conventional power plants.

In parallel, it is important to drive grid expansion and to provide for adequate reserve capacity for a rapidly growing share of weather- or daylight-dependent renewable energy feed-in to ensure continued power supply reliability. This makes a holistic national energy master plan all the more urgent, one that also resolves uncertainty regarding the extension of nuclear power plant operations.

Healthcare



Employing around 4.6 million people, Germany's private and public healthcare sector has been a stabilizing factor through the crisis. Still, the effects of the crisis will impact statutory health insurance (SHI), since its financing system is rooted in salary levels and employment rates. Depending on how the economy develops in the years ahead, the German SHI system could see a deficit ranging from EUR 5 to 30 billion by 2018.

To ensure that the healthcare industry continues to deliver growth, employment, and innovation, its focus should lie on quality, not predominantly on driving costs down. This makes it imperative to foster the provision and development of high-quality medications on a broad scale in Germany. Over the long term, the healthcare industry could become one of the German economy's true strengths.

Further sector professionalization and increased "industrialization" will be prerequisites to achieve this. Statutory health insurers, for example, should continue to drive their own consolidation. With currently 170 statutory health insurers in Germany, reducing this complexity makes economic sense (and continues to be a political objective). The insurer role must become that of a health manager who supports patients in navigating medical treatment. The provider landscape will shift as well, with private, profit-oriented healthcare providers like hospital chains gaining significance. Concerted efforts in research and development will help medical technology and pharmaceuticals companies push innovation further. Moreover, internationalization can become a key impulse for growth – for large hospital chains and health insurers, for example.

Policymakers need to do their part by ensuring prudent industry deregulation. Per capita health insurance rates currently under discussion are less relevant for the sector's development. Embedding better incentives in the healthcare system will prove more important. These could include deductibles and personal contributions that bring patients transparency regarding the real value of "everyday" healthcare. Such a value orientation would also help promote sector professionalization and industrialization over the long term.

Insurance

Germany's insurance sector employs over 525,000 people and manages invested assets totaling around EUR 970 billion. Although affected by the financial and economic crisis, the industry got along without any state aid. Thanks to its stable business model and risk-conscious corporate management, Germany's insurance sector could uphold its financial stability to the greatest extent, even if the spread between individual companies has grown. At the same time, industry maturity at high profitability to date progressed. Following an upward trajectory lasting decades, the share of disposable income spent on insurance premiums has now seen slight declines since 2007.

Despite its volatile profitability, life insurance carried the sector's growth. The macroeconomic environment and regulatory change are, however, significant factors of uncertainty. Due to the guaranteed interest associated with life insurance policies, continued low interest rates could impair both the value proposition for customers and the profitability and financial stability of insurance companies themselves. Beyond this, life insurers have yet to sufficiently utilize the fundamentally positive growth prospects rooted in demographic developments. This is why they should thoroughly review their business model and – depending on their starting position – ensure adequate risk exposure based on product and asset allocation strategies, while optimally addressing growing customer segments (those over age 55). Beyond this, every life insurance company should aim to further "weatherproof" the business by broadly diversifying the product portfolio, by optimizing sales, and by boosting efficiency.

Over the years, property and casualty insurance has proven to be a stagnating, yet profitable business. The general increase in price sensitivity among private and corporate customers – further intensified by the economic downturn – places property and casualty insurers under mounting pressure. In addition, the reserves for future claims could prove to be inadequate in the case of rising inflation. Not all insurance lines have been affected equally up to now – but some lines (motor insurance in particular) should take a close look at their business model. What will be needed in all segments is to continuously promote operational excellence in pricing/underwriting and in claims and productivity management. While doing so, insurers should also develop new areas of growth, emerging, for example, from climate change.

Banking

Since the financial sector has been the epicenter of the most recent crisis, many banks were seriously shaken – numerous financial institutions had to rely on substantial amounts of government aid. In response to the crisis, leaders in politics and business alike argue the need for a revised banking concept: the sector should primarily focus on serving the economy overall. But on the whole, the industry deserves more differentiated examination, since many banks actually remained relatively stable through the turbulences.

To ensure their continued performance, German banks will need equity capital of around EUR 400 billion in 2012. Currently, they have an equity base of around EUR 340 billion, including repayable capital injections from the government totaling around EUR 50 billion. Hence, banks will need new equity capital of about EUR 110 billion. To cover the cost of capital and to remain attractive to investors, the sector would have to generate returns of 10 percent after taxes – or around EUR 40 billion.

Even allowing for improvements in costs, risk provisioning, volume, and margins, earnings after taxes in 2012 will likely only reach EUR 28 billion. Thus, banks would need to boost their profits by 40 percent or EUR 12 billion. Substantial cost reductions and higher margins in corporate and retail banking would need to contribute over three-quarters to closing the gap; capital markets business and the remaining segments, the rest. To date, however, banks have been unable to generate a return of 10 percent after taxes even in boom years. The country's banking structure requires a fundamental transformation if the sector is not to fall further behind its international counterparts.

Outlook

Ensuring lasting success in economic actions amid uncertainty: this is the core challenge for businesses in the volatile world. Less so than ever before will it be possible to derive business decisions from precise forecasts. Expecting and allowing for the unexpected will thus become a fundamental aspect of successful management.

German companies are very well equipped to successfully navigate the volatile world – they are well positioned to seize the opportunities currently emerging. Achieving a combination of growth, resilience, and an ongoing renewal readiness will prove decisive.

It is up to the government to pave the way for renewal. Companies need investment security, a level playing field, modern infrastructure – and of course, a pool of highly qualified talent.

With this study, McKinsey hopes to support companies in building on their existing strengths. We intend to deepen understanding of the volatile world's realities and scope for action in discussions with our clients in all industry sectors – and jointly drive deliberations further.

Welcome to the volatile world.

McKinsey Germany
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