Brazil and Germany:

A 21st-Century Relationship
Opportunities in Trade, Investment and Finance

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Brazilian-German Trade and Finance: Complements and Caveats

Complements	
Endowment: Natural resources	Brazil is abundantly endowed in natural resources and land, whereas Germany is poor in the first and relatively poor in the second. Therefore, Brazilian exports of natural resources are welcome in Germany, which depends on importing raw materials from abroad.
Endowment: Labor	Germany is relatively abundant in skilled labor and less so in unskilled labor. Hence, Germany holds a comparative advantage in producing goods and services that require advanced labor. Meanwhile, populous Brazil is working to improve its education system. Thus Brazil and Germany are not competitors with respect to products that either require significant skilled labor or rely upon unskilled labor.
Endowment: Capital and current account balances	In order to enlarge the Brazilian capital stock, large investments are necessary. Brazil's savings are not large enough to finance domestic investment. Germany has a high income level, high saving rate and current account surplus. Germany's savings (and current account surplus) are therefore available to finance Brazil's investment (and current account deficit).
Caveats	
Context of trade policy	Brazilian and German trade policies are firmly rooted in differences between the countries' long-standing institutional structures and mind-sets. Brazil's trade policy places a high premium on developing national industries and promoting the interests of developing countries. Germany's economic policy is traditionally export-oriented and strongly intertwined with its European neighbors, to the degree that there is no independent German trade policy, only German interests that contribute to the formulation of the EU's trade policy. These separate approaches can lead to differing trade strategies.
Agricultural products	Brazil holds a comparative advantage in many agricultural products, which implies a disadvantage for German producers. German farmers, in turn, are being protected through restrictions and subsidies of the EU's common agricultural policy. These measures are an object of consistent dispute.
Export-oriented job creation	Both countries have a strong interest in obtaining and maintaining high levels of employment. Increasing exports are a key instrument to satisfy this goal, especially for Germany. As a result, both countries pursue high exports and, consequently, current account surpluses. As all countries cannot simultaneously have current account surpluses, Germany's surplus might sooner or later become an object of dispute.
Desired outcomes	Although Brazil and Germany share the common aim to increase employment by foreign trade activities, they differ with respect to deeper desired outcomes of trade. In Brazil, fighting poverty, increasing the material prosperity of the population and importing technological knowledge are of greater importance than in Germany. In Germany, economic growth and full employment are the primary goals of trade.
Terms of trade and wealth	If the terms of trade of one country rise, that country receives a larger quantity of imported goods for a given bundle of exported goods. Therefore, an increase in the terms of trade of an economy has a positive impact on the wealth of the country. However, given the contrasting export portfolios, an improvement in Brazilian terms of trade would imply a reduction to German terms of trade (and vice versa). This represents an irresolvable trade-off.
Exchange rate policy	The real depreciation of the domestic currency has a positive impact on the volume of a country's exports. If, for example, Brazil tries to increase its exports by devaluing its currency, the result is a relative appreciation of Germany's currency, which has a negative impact on German exports. As a result, there is another irresolvable trade-off if both countries try to increase exports by devaluing their currencies. However, as a member of the eurozone, Germany has limited influence on the exchange rate.

Introduction

On the surface, it would seem that Brazil and Germany present many opportunities for fruitful bilateral trade and investment. In terms of comparative advantages, the Brazilian export portfolio tacks heavily towards precisely the raw materials German manufacturers require—and lack domestically. Conversely, German producers specializing in high-end technological and knowledge-based goods could find an expanding consumer base both in the burgeoning Brazilian middle class and in business-to-business trade with Brazilian partners. In terms of investment, Brazil would appear to be a prime destination for surplus German savings. For example, Brazil faces an infrastructure deficit while German firms have achieved particular sophistication in this field. For German firms, investment in this sector in Brazil can offer returns currently unavailable in continental Europe.

To an extent, the statistics reflect the growing opportunities between the two. As this study demonstrates, both bilateral trade and investment have increased in recent years. Nevertheless, the relationship has yet to reach its full potential. Politics and policies have curtailed trade expansion. Brazil's membership in the Mercosul trade bloc and Germany's membership in the European Union have hampered the pair's ability to forward a bilateral trade agreement, as each bloc maintains certain defensive positions that limit the other from exercising its comparative advantages. Capital flows between the two countries—especially long-term foreign direct investments—remain underwhelming.

This paper, jointly authored by economists and political scientists from the Bertelsmann Stiftung of Germany and the Fundação Getúlio Vargas of Brazil, reviews economic relations between the two countries with a particular focus on highlighting the opportunities while addressing the bottlenecks that slow bilateral trade and investment. The text is organized as follows:

- Chapter I, authored primarily by specialists from the Bertelsmann Stiftung, reviews the state of Brazilian-German trade. The chapter reviews each country's drivers of trade as well as each country's trade policies. It continues to analyze the nature of the bilateral trade itself, as well as policy issues that prevent further trade. The chapter then reviews progress on a Mercosul-EU free trade agreement, and concludes by considering 21st century trade opportunities.

- Chapter II, authored primarily by specialists from the Getúlio Vargas Foundation, considers investment, comparing German and Brazilian capital flows against what traditional theory predicts. The chapter distinguishes between more transient portfolio investment and longer-term foreign direct investment. It also reviews how a lack of harmonization in macroeconomic policy can lead to distortions in financial flows.

- Chapter III attempts to draw tangible and actionable recommendations based on the first two chapters. This chapter accepts that Germany and Brazil may pursue differing policies, and are constrained by their respective regional blocs, but it argues that common ground exists. Forthcoming policy can be geared towards this common ground.

In the 21st century, neither emerging markets nor developed countries alone can sustain global growth. Rather, it will be the interaction between the knowledge of advanced economies and the dynamisms of emerging economies that will most likely motor global growth. We believe Brazil and Germany can be at the forefront of this interaction.

This text represents the outcome of a year-long collaboration between Bertelsmann Stiftung and the Fundação Getúlio Vargas. Moving forward, both sides are dedicated to continuing the exploration of bilateral ties between Brazil and Germany and to helping build a truly 21st century relationship.

Prior to addressing the future of the relationship, this introduction first offers a perspective on the past and the present.

Brazil and Germany: Two countries with strong historical ties

Bilateral relations between Brazil and Germany are long-standing and comprehensive. The history of German immigration to Brazil traces back to the 16th century. This immigration increased at the beginning of the 19th century; from 1872 through 1939, nearly 200,000 Germans immigrated to Brazil. This tide reached an apex between 1920 and 1929, when 76,000 Germans crossed the Atlantic to Brazil. In the 1940s and 1950s, people of German origin accounted for roughly 20 percent of the population in some Brazilian states, such as Santa Catarina and Rio Grande do Sul (see Gregory, 2013, pp. 114–121).

These strong ties resulted in an intensive bilateral economic partnership starting in the second half of the 1950s. In 1954, for example, the German steel company Mannesmann began operations in Brazil. In 1955, Sofunge, which later became a part of Mercedes-Benz, did the same. German automaker Volkswagen opened a plant in 1959. In the 1970s, German commitment reached its peak when German companies from heavy industry, chemical industry, machinery, plant engineering and the automobile industry invested large sums of money in Brazil and established numerous plants. During the 1980s, German companies and investors reduced their involvements because of the economic downturn in Brazil. Nevertheless, at present there are about 1,600 companies in Brazil with German capital, and German chambers of commerce in Sao Paulo, Rio de Janeiro and Porto Alegre (see Lohbauer, 2013, pp. 133–135 and 144–145).

There is also a strong trade relationship between both countries. Brazil is by far the most important Latin American trading partner for Germany, while Germany is at present the fifth or sixth most important trading partner for Brazil, behind China, the US, Argentina, the Netherlands and Japan (see Lohbauer ,2013, p. 144).

Relations between Brazil and Germany are not restricted to economic ties. For more than 140 years, the two have been linked by active bilateral diplomatic relations. People in both countries share important values, most notably for democracy and corresponding institutions. Bilateral cooperation has occurred on issues including education, culture (there are, for example, five Goethe-Instituts in Brazil), science and technology, climate change and environment, labor and social affairs, energy and international crisis management.

These extensive connections form a sound base of mutual trust, respect and support that serves as the foundation for an expansion of bilateral economic relations to the benefit of both countries.

Brazil and Germany: The largest economies of their respective regions

Brazil is the core economy of Latin America, and Germany plays that role for the EU. Measured in terms of gross domestic product (GDP), Germany has a 20 percent share of total EU GDP, while Brazil's share of Latin American and Caribbean GDP is even larger, accounting for almost 38 percent (see Table 1).

Table 1: Estimated Gross Domestic Product (GDP) in 2013, expressed in current prices

Region/Country	GDP absolute in US$ (Billions)	Share of the relevant region in percent
European Union (EU)	17.267	100.0
Germany	3.593	20.8
Latin America and the Caribbean	5.774	100.0
Brazil	2.190	37.9

Source: International Monetary Fund, World Economic Outlook Database, October 2013.

The importance of Brazil and Germany to their respective geographical regions is also reflected in population size. Germany accounts for roughly 16 percent of the entire EU population, while Brazilians account for a third of the Latin American and Caribbean population (see Table 2).

Table 2: Population, expressed in millions

Region/Country	Population mid-2013	Share of the relevant region in percent
European Union (EU)	506.0	100.0
Germany	80.6	15.9
Latin America and the Caribbean	606.0	100.0
Brazil	195.5	32.3

Source: World Population Reference Bureau: World Population Data Sheet 2013, p. 8–11.

Hence due to their economic strength, Brazil and Germany can be considered anchor economies for Latin America and the European Union.

Chapter I:

Trade

1. A Complementary Relationship with Room for Growth
2. The Drivers of Trade
3. German and Brazilian Trade Policy
4. Brazilian-German Trade
5. Complications in Brazilian-German Trade
6. Towards a Mercosul – EU Free Trade Agreement?
7. 21st-Century Opportunities for a 21st-Century Relationship

Chapter I: Trade

This chapter reviews the drivers of trade for Brazil and Germany, as well as the opportunities inherent in the pair's bilateral trade relationship. **Section 1** offers a brief overview of Brazil and Germany's complementary relationship with room for growth, while **Section 2** considers the drivers of trade for both countries. **Section 3** reviews German and Brazilian trade policy, which, in turn, influences **Section 4**, which analyzes actual German-Brazilian trade. **Section 5** considers the complications of that trade, while the **Section 6** reviews progress towards a Mercosul-EU Free Trade Agreement (FTA).

1. A Complementary Relationship With Room for Growth

The Brazilian-German trade relationship is mutually beneficial and growing. Burgeoning commerce stems from compatible export portfolios and national endowments. German demand for Brazilian raw materials is matched by Brazilian demand for high-quality goods manufactured in Germany. Germany offers Brazil diversification away from predominant partners such as China and the US, as well as access to capital and cutting-edge technology. Meanwhile, Brazil offers Germany a modicum of resource security, as well as access to a massive and rapidly expanding middle class whose members are potential customers for German industrial goods.

Unfortunately, the trade relationship is not dictated by economics alone. In both countries, trade policy is partially shaped by political and institutional factors that may make the path to improving the relationship more complicated than simply increasing bilateral investment.

2. The Drivers of Trade

Drivers of Brazilian Foreign Trade

Determining Brazil's factor endowments is more difficult than in its region's less economically dynamic countries, such as Argentina and Chile, because of Brazil's large, complex portfolio of imports and exports (Muriel and Terra, 2009). Moreover, the country's true abundances and deficiencies have most likely been obscured or at least distorted by years of protectionist trade policy.

Despite this caveat, certain factor trends are clear. In particular, Brazil enjoys strong endowments in labor and especially land and natural resources. With a population of more than 200 million and a still-developing school system, Brazil maintains factor abundance in unskilled labor. This abundance is often exploited through agricultural labor such as coffee cultivation. Brazil, which is the fifth largest country in the world by area but has a relatively low population density, clearly

has an abundance of land. It is rich in natural resources, including fertile land, minerals, water and forests. Brazilian trade patterns also indicate a degree of capital. Muriel and Terra posit that this capital could reflect interactions with even less-developed countries, or a residual distortion from the import substitution industrialization (ISI) period.

In Brazil, the volume and structure of exports is heavily influenced by an abundance of raw resources, high commodity prices and strong global growth levels. Brazil is rich in mineral resources such as iron ore and agricultural products such as soybeans that are vital for large emerging markets, specifically those pursuing an urbanization strategy such as China. Emerging-market growth and, subsequently, strong commodity prices have been drivers of Brazilian exports in the 21st century. Beyond certain niche industries such as Embraer aircraft, Brazilian export expansion in recent years has been pushed by global demand for raw materials.

Brazilian imports are typically driven by the need to supply domestic manufacturers with parts, as well as the need to satisfy Brazilian demand for manufactured goods beyond the capacities of domestic firms. Strong growth in formal employment and real wages, combined with initiatives such as the conditional cash transfer program Bolsa Familia, have lifted tens of millions of Brazilians from poverty and have created a growing lower-middle and middle class of consumers who can now afford imported manufactured goods. The recent economic growth has also fostered an upper class keen on high-end European imports.

Brazil's endowment weakness appears to lie in its relative lack of skilled labor, such as engineers. Here it is important to draw regional distinctions, as Brazil's labor endowment is differentiated across the country. Urban centers such as São Paulo and Rio de Janeiro may have more access to skilled labor. Other areas, such as the north and the northeast, are lacking in it. Overall, Brazil is experiencing a shortage of skilled labor in important industries such as infrastructure and resource extraction.

Regarding overall competitiveness, Brazil has demonstrated tremendous potential but lingering inefficiencies. The country is home to a sophisticated business community and has the advantages of a massive internal market. But its competitiveness is hindered by, among other things, infrastructure deficiencies that cost Brazilian businesses billions of dollars annually.[1]

1 According to a 2010 Morgan Stanley Blue Paper, Brazilian fields produce grain twice as fast as the rest of the world, but getting that grain to port across unpaved roads can cost almost half its value. Meanwhile, vast mineral deposits remain buried deep within the earth for want of railroads to transport the goods. Statistics support these anecdotes. The paper found the that Brazilian infrastructure investment has been on a consistent decline, from 5.4 percent of GDP in the 1970s down to 2.1 percent in the 2000s—only slightly above the estimated 2.0 percent required to simply maintain the existing infrastructure stock (See Paiva 2010). As a result, the World Economic Forum's Global Competitiveness Report 2013–2014 ranks Brazil 114th of 148 countries in quality of overall transport infrastructure (World Economic Forum 2013).

Drivers of German Foreign Trade

In Germany the volume and structure of exports and imports are mainly determined by an abundance of capital, a well-trained work force, favorable unit labor costs, a high standard of scientific and technical knowledge, supply-chain integration within Europe and the lack of natural resources. Hence the German economy depends on importing raw materials from abroad and exporting manufactured products that contain a high degree of human and physical capital.

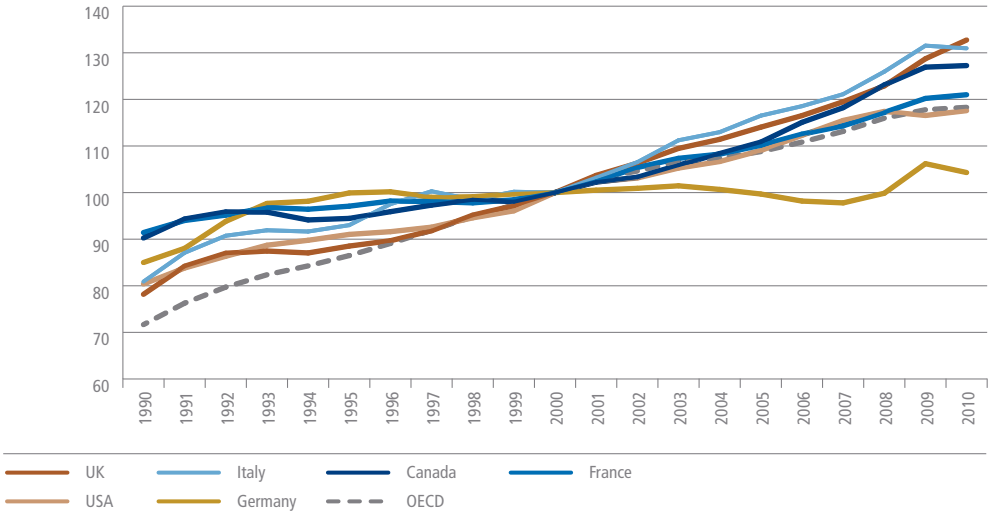
Germany has a highly skilled and specialized labor force, which can in particular be attributed to the country's system of vocational education. This "dual education system" combines apprenticeships in a company with training in vocational schools. As a result, Germany can be described as an economy that is well endowed in skilled labor but relatively poorly endowed in unskilled labor. Thus the country exports goods and services produced with the help of skilled labor and imports products from abroad that require unskilled labor. In terms of capital, Germany can be classified as a capital-rich country, and therefore theoretically meant to export capital-intensive goods and services.

Another driver of the volume and structure of German exports is the country's high level of technology, which allows Germany to export high-tech products, knowledge and technology-intensive goods and services. One indicator of German technological prowess is the number of annual patent applications. In 2009, Germany ranked fifth in the number of patent applications per one million employed persons, ahead of all other large industrial countries (Expertenkommission Forschung und Innovation, 2012).

Despite being labor-poor in a global context, Germany benefits from favorable labor costs per unit. Though it is a high-wage country, growth of wages over the past 15 years has been lower than in other developed economies. The restraint on wages is rooted primarily in a period of high unemployment and structural reform of the labor market in the 2000s, as well as a weakening of the bargaining power of German unions.

Following reunification in 1990, unemployment in Germany reached double digits by 1994 and remained elevated for more than a decade. Persistent high unemployment and the increasing possibility of outsourcing jobs to Central and Eastern Europe exhorted significant downward pressure on German real wages. In response to the continuing employment crisis, the government, under Chancellor Gerhard Schröder, enacted a set of labor market reforms aimed at increasing participation in the labor force by allowing for more flexible forms of employment and reducing benefits to the long-term jobless. These reforms also acted to slow wage growth. Finally, and related to these structural changes of the German economy, the unionization of the labor force decreased significantly. In 1990, more than 11 million people were members of a union. By 2011, membership had dropped to 6.15 million.

Figure 1: Labor costs per unit across countries and times (index: labor costs per unit in the base year 2000 = 100)



Source: OECD, calculations of the Institute for the Study of Labor (IZA), Bonn. | BertelsmannStiftung

Another driver of German exports is its membership in the EU and the eurozone. Germany's central location in Europe and high degree of integration with neighboring countries through the common European market has led to strong growth in intra-industry trade between Germany and other European countries. German producers draw on asupply chain that includes firms in many European countries and makes use of advantageous product specialization and cost competitiveness (i.e., lower labor costs in Central and Eastern Europe). The monetary union of the eurozone also benefits German competitiveness by preventing an appreciation of the currency.

In a separate study, the Bertelmann Stiftung estimates that if the separate German currency still existed, it would have appreciated by roughly 23 percent, whereas the currencies of the remaining countries of the eurozone would have been devalued by an average of nearly seven percent (Bertelsmann Stiftung, 2013a). Such an increase in relative prices would have had a negative impact on German exports. At the same time, German imports would have increased. Being a member of the single European currency, Germany does not suffer from an appreciation of its currency because the exports of all 17 countries using the euro are more or less balanced to the imports – at least until 2011.

Evaluating the overall competitiveness, Germany is specifically strong in macroeconomic stability, capacity for innovation, quantity and quality of local suppliers, judicial independence, intellectual property protection and quality of overall infrastructure. Germany maintains a large trade surplus and a current account surplus.

3. German and Brazilian Trade Policy

Brazilian Trade Policy

Brazilian trade policy has historically been protectionist, dating back to the import substitution industrialization (ISI) model of development employed during the middle of the 20th century. Since the market liberalization of the 1980s, Brazil has embarked on a course of relative trade openness, lowering tariffs unilaterally and pursuing regional trade integration with Argentina, Uruguay and Paraguay via Mercosul.

Implementation of Brazilian trade policy is overseen by the Ministry of Development, Industry and Trade, the minister of which also serves as the chairman of the Chamber of Foreign Trade (CAMEX). This body was created by the government of President Fernando Henrique Cardoso in 1995 to ensure multi-agency policy coordination as well as to advise the president (Cantarino da Costa Ramos, 2010). As a member of Mercosul, Brazil is required to negotiate new trade agreements with the regional bloc as a whole rather than bilaterally. After being stalled for a number of years, EU-Mercosul negotiations restarted in 2010.

Brazil's current trade policy still has attributes inherited from its ISI period, with an emphasis on protection of import-competing sectors, notably automobiles, electrical and electronic equipment, textiles, clothing, rubber and plastics (Da Motta Vega, 2009). Protection generally takes the form not only of tariffs but also of non-tariff barriers, including complex import licensing schemes, import fees and anti-dumping duties, which increased from 63 measures in 2008 to 83 measures in mid-2012 (WTO, 2009; WTO, 2013).[2]

In May 2010, as a result of a deteriorating trade balance in manufactured goods, the Brazilian government introduced a 25 percent preference margin in government procurement for domestic bidders as well as an increase in import tariffs on car parts (Cornet et al., 2010). In 2011, Brazil implemented a 30 percent tax on imported vehicles while exempting domestically produced cars and trucks, in a measure originally intended to last one year but extended for five additional years in 2012. These measures have resulted in a formal request for consultations at the WTO filed by the European Union on December 19, 2013.

Brazil's trade policy also features export promotion. Tools for this include the Export Financing Program (PROEX), primarily targeting small and medium-sized enterprises that otherwise struggle to obtain credit, as well as the Export Guarantee Fund (FGE). In 2012, PROEX provided US$4.88 billion to Brazilian exporters. Between 2009 and 2012, FGE supported 253 export operations totaling US$32.6 billion.[3] Finally, the Brazilian Development Bank (BNDES) has several programs in place to ease the interest rate burden on exporters (WTO, 2013).

2 More than half of the anti-dumping measures in place in 2011 were directed against China (Lima/Ragir 2011).

3 FGE supported these export operations by guaranteeing up to 100 percent of the commercial, political, and extraordinary risk.

German Trade Policy

Germany's preference for global integration is also a well-accepted guideline for its policymakers. German trade policy is formed and implemented by the Federal German Ministry on Economics and Technology (BMWi). The ministry has fostered a number of initiatives to improve German competitiveness.[4] The German Office of Economics and Export Control (BAFA) supports small and medium-sized enterprises and oversees export and import regulations (BAFA, 2012). Germany Trade and Invest (GTAI) is an agency that promotes Germany as a location for doing business and assists companies operating in foreign markets.

However, Germany cannot control its own trade policy. As part of the European Union, it is only through the intergovernmental institution of the Council of the European Union (CEU), as well as the supranational European Commission (EC) and European Parliament (EP), that trade policy involving Germany (setting of tariffs or negotiation in the WTO and other pacts, for example) can be created. While the EU considers trade liberalization essential to further economic growth, there are also countries and industries that represent important protectionist interests within the union. The stance of a single member country, even an important one such as Germany, can often remain unclear as it is hidden behind the veil of the common EU policy that represents a consensus among 28 national policy preferences. The EU has prioritized the liberalization in areas such as trade in services, public procurement and protection of intellectual property rights. It is also concerned with securing supplies of raw materials and energy for the industrial countries (EC, 2011). However, the EU also pursues a policy of protecting certain industries, notably agriculture, via high most-favored nation (MFN) tariffs as well as provision of subsidies to European farmers, which has consistently frustrated developing countries (WTO, 2013a).

The EU Generalized System of Preferences (GSP) grants preferential access to the EU market for developing countries. The EU revised the GSP in 2013 to focus on assisting least-developed countries rather than middle-income countries. As of January 1, 2014, a number of countries that have been classified as high or upper-middle-income countries no longer benefit from these preferences. Brazil, along with all Mercosul members except Paraguay, is among the countries that have lost this preferential access.

4 The initiative features four elements: 1) Supporting small and medium-sized German companies abroad, particularly in emerging markets; 2) Exhausting all the mechanisms available to trade policymakers, including a marketing campaign for investing in Germany, company match-making, and the realignment of export development schemes and export credit guarantees; 3) Reducing bureaucracy by abolishing unnecessary export regulations and accelerating the process for granting export and investment credit guarantees; 4) Strengthening the international trade framework by working towards the successful conclusion of the Doha Round and the negotiations about the Anti-Counterfeit Trade Agreement (ACTA) as well as concluding bilateral trade agreements with emerging economies in Asia and Latin America.

4. Overview of Brazilian-German Bilateral Trade

Brazilian-German trade has consistently increased over the past decade, though growth slowed following the economic crisis of 2008–2009. Of major EU member states, Germany is by far Brazil's largest trading partner, both in terms of imports and exports. Germany is currently Brazil's fourth largest trading partner behind China, the US and Argentina (GED, 2013).

The German-Brazilian connection fuels trade between the EU and South America. In 2010, Germany accounted for one third of all Brazilian trade with the EU, and this figure likely underestimates the total value owing to the so-called Rotterdam effect.[5]

Brazil's major exports to Germany include iron ore, soy and soy products, coffee products, meat, copper and crude oil (German Foreign Office, 2012). While raw materials predominate, some machinery and aircraft parts also figure into Brazil's German export portfolio. The majority of Brazilian exports to the EU overall are likewise in raw commodities. Twenty-one percent of eurozone ore and mineral imports originate in Brazil, as do 11 percent of agricultural imports (EC, 2012).

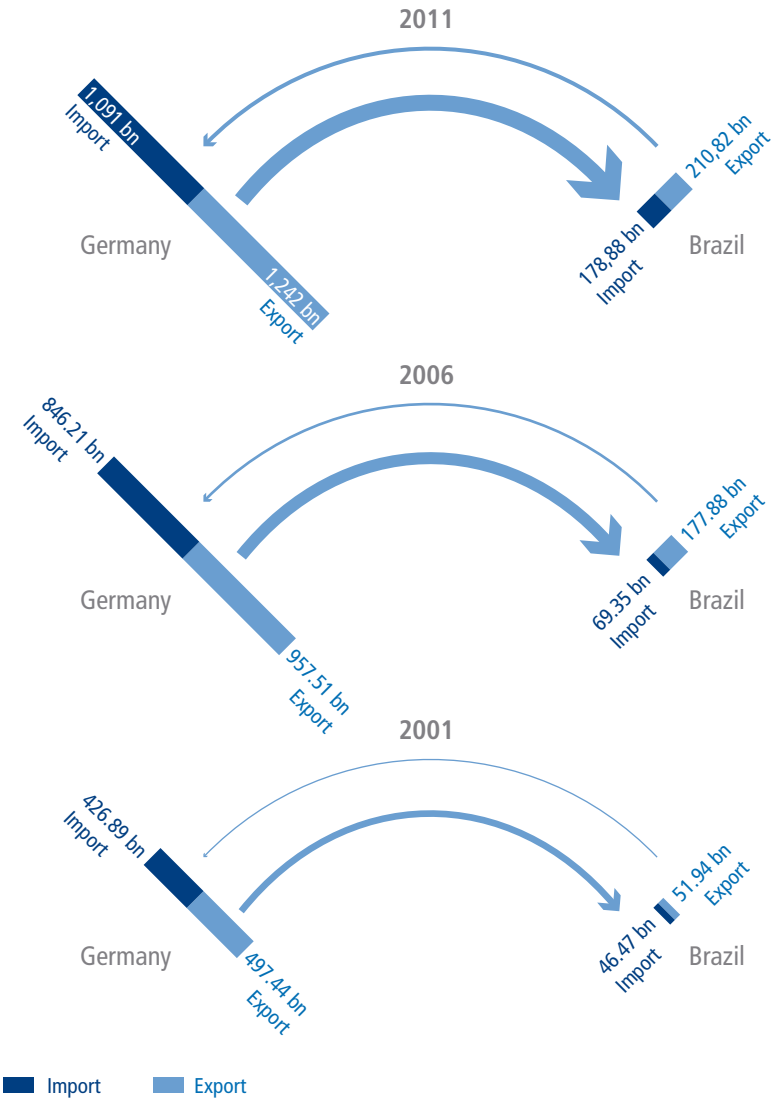
Key German exports to Brazil include machinery, cars and car parts, as well as basic chemicals and pharmaceutical products (German Foreign Office, 2012). In contrast with the Brazilian export portfolio, German exports to Brazil are overwhelmingly manufactured goods, either for final consumption or intermediate goods and capital goods for Brazilian businesses. Once again here, German-Brazilian trade is indicative of the greater EU-South American relationship. In 2011, for example, 88.5 percent of Mercosul imports from the EU were manufactured goods, with trade for machinery and in transport equipment accounting for 49.2 percent of the total (EC 2012).

In terms of overall value, Brazilian-German trade is relatively balanced. Brazil had a trade surplus with Germany seven of the eight years between 2003 and 2010, peaking at US$2.78 billion in 2007. This surplus has averaged only US$1.1 billion. Brazil's trade surplus with Germany appears to reflect a tide change as Brazil traded at a deficit with Germany from 2000 to 2003.

The transition does not reflect a decrease in Brazilian appetite for German goods. On the contrary, German exports to Brazil nearly tripled between 2000 and 2010, from US$4.43 billion to US$11.75 billion. Increases in Brazilian exports simply outpaced increases in Brazilian imports from Germany.

5 The Rotterdam effect refers to goods destined for a given country that enter the eurozone in third countries such as the Netherlands. In cases where these goods are then traded to Germany, these transactions are recorded as Dutch trade with Brazil, and subsequently as eurozone trade between the Netherlands and Germany.

Figure 2: Overview of Brazilian-German trade



Source: Bertelsmann Stiftung, Global Economic Dynamics | BertelsmannStiftung

Bilateral trade flows are complementary and mutually beneficial. From the German perspective, exporting to Brazil offers domestic manufacturers the opportunity to reach the country's growing middle class–a massive new group of consumers. There is also a growing class of extremely wealthy Brazilian consumers who represent a prime market for high-end German goods. Finally, increased business activity in Brazil generates opportunities for German intermediate goods and capital goods such as chemicals and machine parts and equipment that make up the backbone of the German exporting sector.

From the Brazilian perspective, exporting to Germany helps Brazil diversify its trade portfolio. Without trade to Europe, Brazilian commodity exporters could be particularly vulnerable to a downturn in China. While Brazil executes a greater volume of trade with both Argentina and the US, Brazil also competes with these nations on exports such as soy, beef and hydrocarbons. Not only can this create trade policy friction, but it also means Brazil must find additional consumers for such goods. Germany fits this description neatly, as it does not compete with Brazil in most commodity sectors.

German manufactures rely on commodity imports to generate their finished products. A massive, politically stable commodity producer such as Brazil can offer resource security for Germany. Meanwhile, German demand for Brazilian commodities not only expands the quantity of annual sales, but also helps bid up the global price—both to the advantage of Brazil.

Figure 3: Overview of trade drivers

For Germany		For Brazil
Large growing market for German goods	→	Key trade diversification from USA & China
Brazilian development means increased trade opportunities for German firms	→	German expertise key for Brazilian infrastructure development
Maintain national resource security for manufacturing sector	→	German commodity demand increases quantity/prices of Brazilian exports
Global leader in green energy exports	→	Dedicated to green development

Source: Bertelsmann Stiftung

5. Complications in Brazilian-German-Trade

Despite—or perhaps because of—the complementary nature of the two countries' factor endowments, the EU and Brazil are involved in a series of long-standing trade disputes. Brazil and the EU have been involved in 12 cases before the WTO; seven of them were brought by Brazil, while the EU has acted as a complainant five times (for an overview, see Table 1).

While Brazilian complaints have focused on the EU's import restrictions on agricultural products and raw materials, the EU has objected to what it sees as Brazilian protectionism on intermediate inputs and final goods. Non-tariff and behind-the-border trade barriers feature prominently in most of the disputes. With the EU still struggling to recover from the fallout of the financial and economic crisis that began in 2008, the risk of protectionism and new trade disputes remains high. Experts fear that as the Doha Development Agenda negotiations remain in a stalemate, the risk of trade dispute settlement initiations rises as well. As one diplomat put it, "The less you negotiate, the more you litigate" (Miles 2012).

In the current Doha round, Brazil and the EU hold opposing views on many crucial issues. Most importantly, they disagree on further concessions for agricultural and industrial products. Due to the high competitiveness of its farmers, Brazil sees huge potential to increase the global

market share of its agricultural products. Therefore, it has been particularly concerned with the liberalization of agricultural markets. Brazil has taken a fairly aggressive stance on market access, domestic support as well as export subsidies (Nogueira, 2009). Developed economies, in particular the EU and the US have offered cuts but they have been rather unrelenting about employing the special safeguard measures (SSM) that allow for the temporary use of import restrictions on certain products (for example, sugar) in case of a sudden surge in imports.

Table 1: Brazilian–EU Trade Disputes before the WTO

No.	Complainant	Respondent	Issue
DS69	Brazil	EU	EU tariff quota on frozen poultry
DS81	EU	Brazil	Brazilian measures regulating the import of cars and car parts
DS116	EU	Brazil	New payment terms introduced by the Brazilian Central Bank
DS154	Brazil	EU	EU special preferential treatment for soluble coffee
DS183	EU	Brazil	Brazil's import measurers for textiles
DS209	Brazil	EU	EU special preferential treatment for soluble coffee
DS219	Brazil	EU	EU anti-dumping duties on iron imports from Brazil
DS266	Brazil*	EU	EU subsidies for the sugar industry
DS269	Brazil**	EU	EU tariff reclassification of frozen poultry
DS332	EU	Brazil	Brazilian measures regulating the import of tires
DS409	Brazil	EU	EU seizure of generic drugs destined for Brazil
DS472	EU	Brazil	Brazilian taxation and charges on certain manufactured goods

* Together with Thailand and Australia.
** Together with Thailand.

Source: Bertelsmann Stiftung based on WTO data (as of March 11, 2014).

6. Towards a Mercosul-EU Free Trade Agreement?

Given their complementary and growing trade ties, Germany and Brazil would both stand to benefit from closer, direct bilateral trade regulations. However, given the former's membership in the EU and the latter's association with Mercosul, an FTA would require a larger accord between the two blocs. As early as 1995, the EU and Mercosul signed a framework agreement and initiated a dialogue aiming to establish free trade between the two blocs. Since then, however, negotiations regarding a possible EU-Mercosul FTA have oscillated between new pushes for an agreement and lackluster attempts to hammer out the details.

On May 29, 1992, a Joint Institutional Cooperation Agreement was signed by the EU and the (then) four Mercosul countries. In July 1998, the EU decided to negotiate an FTA with Mercosul and Chile; meetings and discussions started that same year. Negotiations have since oscillated between new thrusts to fix the agreement and lackluster attempts to hammer out the details (Flôres, 2013a). During this period of more than 15 years, not many formal studies have been made on the likely impact of the FTA.

In a pervasive partial-equilibrium analysis, Calfat and Flôres (2006) show that potential EU gains from such an agreement are much more widespread, in particular for several manufactured goods, while Mercosul will reap advantages from a number of commodity exports. In spite of the significant trade deviation to China by most Mercosul members since the time of the study, the evaluations are still valuable as upper bounds for gains at the individual product level.

Flôres and Marconini (2003) argued that many synergies could be found outside the classical realm of agriculture. Migration of human capital—a ticklish issue for the EU—could bear interesting and rewarding outcomes for both sides; telecommunication services are another potential win-win area.

Negotiations officially reopened in May 2010, with Brazil emerging as a key leader in the dialogues. Both Brazil and Germany could realize significant gains from an agreement: Brazilian-German trade flows accounted for more than one-fifth of EU-Mercosul trade in 2010.

Brazil would very much like to complete an FTA with a more developed economy. But difficulties and hesitations still plague the advancement of the process. On the Mercosul side, Argentina, and to a lesser extent Venezuela, have posed quite a few demands and objections. From the European side, despite the extremely positive rhetoric, not much enthusiasm has been demonstrated in terms of concessions, which actually mimic the pattern of those offered long ago.

Moreover, two new variables are at stake.

The first is China, a new and massive market that has considerably eased the anxiety of Mercosul commodity exporters—especially meat producers—making the EU a still attractive but less crucial market than it was ten years ago. On the EU side, beyond the several crises still occupying the larger fraction of the Brussels staff, in the trade arena, the prospects of a Trans-Atlantic Trade and Investment Partnership (TTIP) is drawing considerable attention. This is a complicated, ambitious attempt, with no clear outcome but giving way to an extremely time and human resource-consuming process.

A study by the Bertelsmann Stiftung and the IFO-Institute concluded that in global economic terms, both the US and the EU would profit from a comprehensive TTIP (Felbermayr, 2013), with southern EU member states and the UK being the main beneficiaries. Countries outside the TTIP, especially those with very close trade relations with one of the two blocs, such as Mexico, would face trade contraction that would result in decreases to real income and employment.

The study forecasts Brazilian exports to the EU to contract by 9.4 percent if the TTIP is concluded, and Brazilian exports to Germany to contract by 7.9 percent. The study also finds that Brazilian exports to the US could decline by as much as 29.7 percent. Overall, these contractions could cost Brazil more than two percent of per-capita GDP.

The impact on Brazil is somewhat debatable and preliminary, a general evaluation with which Flôres (2013b) agrees. The key issue, more than trade deviation, is the envisaged unified platform of technical norms, rules and standards for manufactures, services and commodities. This implies that Brazil, and Mercosul as well, should set a task force to deeply analyze, out of the potentially common norms that could result[6], those with which it already complies, those it would like to adopt, and those the country sees no point in following. In conducting this effort, Germany, with its close ties with Brazilian industry and its superior technical expertise, could be a friendly partner to Brazil.

In February 2012, German Foreign Minister Guido Westerwelle visited Brazilian Foreign Minister Antonio Patriota, and the two jointly called for progress in the EU-Mercosul FTA dialogues. While they conceded that Europe's subsidies to farmers represent a crucial dividing point, both made clear that their governments supported an agreement. At a summit meeting in January 2013, German Chancellor Angela Merkel won the commitment of Brazilian President Dilma Rousseff and Argentine President Cristina Fernández de Kirchner to exchange concrete proposals for lowering trade barriers by the end of 2013 (Emmott, 2013), something Brussels has failed to do.

On February 24, 2014, Rousseff met with EU leaders to discuss negotiations (GMF, 2014). Mercosul members had met earlier that month to discuss a joint proposal on tariff reductions. Additionally, discussions of the potential for negotiations to move forward without Argentina; a so-called "two-speed" negotiation process have emerged. While this approach would require revising Mercosul rules, Brazil and Uruguay have hinted at preparations to do so if Argentina continues to pursue a more protectionist trade policy (Mercopress, 2014b). Brazil's powerful Confederation of Industries (CNI) has recently come out in support of this idea, noting that FTAs with the EU and US are necessary to maintain Brazil's competitiveness (Ridout, 2014). Paraguay also indicated an inclination to follow the other two members.

Yet obstacles remain. European farm lobbies place a €25 billion price tag on a potential EU-Mercosul FTA, claiming that European farmers will suffer extensive losses in the event of liberalization of the agricultural sector (Mercopress, 2011). The EC's own assessment found the losses to be considerably lower, ranging between €1 billion and €3 billion (Burrell et al., 2011). The agricultural lobby, however, is unlikely to be convinced by the calculations of the EC—a known supporter of free trade.

These developments suggest Brazil and Germany should exploit deeper bilateral relations, without violating the rules of the existing customs unions, and that this would create more opportunities and targeted business ventures in a traditional relationship that is fortunately blooming again.

6 We say "potentially common norms that could result" because in many areas, such as GMOs, the Internet realm and chemical goods, it is hard to conceive a EU-US harmonization (see also Flôres, 2013b).

7. 21st-Century Opportunities for a 21st-Century Relationship

The trade relationship between Brazil and Germany is not just characterized by complementary endowments and competition between national industries. It also features significant opportunities in so-called "new" or "21st-century" trade—many of which remain to be seized.

New trade theory was developed as early as the 1970s, based on the observation that an increasing share of international trade was taking place within industries and could not be explained by the classical theories of comparative advantage and differences in factor endowments (Krugman, 1979). Intra-industry trade, countries trading final goods but also parts and components within the same industry, is seen to be driven by factors such as monopolistic competition, consumer preference for diversity, increasing returns to scale and agglomeration effects. Intra-industry trade accounts for a large part of the exponential growth of international trade in the age of globalization (beginning in the 1990s), as open borders as well as falling costs of transportation and communication allowed for supply chain integration across countries.

Brazil and Germany have taken remarkably different approaches to these developments. While Germany has embraced integration into regional global supply chains, Brazil has generally favored vertical integration—the linking of various stages of production within a country.

For Germany, supply chain integration came naturally given the country's central position in the common European market, scarcity of resources and high degree of industrial specialization. The opening of Central and Eastern Europe's economies in the 1990s provided a special opportunity for German businesses to tap not only new markets but also new sources of relatively cheap labor. Outsourcing or relocating parts of production to Germany's eastern neighbors allowed companies to focus on the stages of production most efficiently done at home, increasing overall productivity.

In Brazil, vertical integration is largely a relic of the ISI model of development of decades past. The country's protection of industries through tariff and non-tariff measures and preference for domestic industry is one important factor preventing supply chain integration. Another key factor is its geographic distance from the world economy's most dynamic and integrated regions (Europe, North America, East Asia), combined with poor logistics infrastructure. With the establishment of Mercosul in 1991, Brazil bet on its own model of regional integration. Mercosul has led to some supply-chain integration in the region—a notable example is the automotive industry in Brazil and Argentina—but Mercosul's closed approach to the outside and long stagnation in terms of deepening internal integration has severely limited the supply chain integration of Brazilian industries. Interestingly, the only industrial segment in Brazil with strong international integration, aerospace (heavily concentrated around aircraft manufacturer Embraer), is also one of the few Brazilian manufacturing segments experiencing strong growth in recent years.

Considering the range of industries present in both countries, increased supply chain integration between Brazil and Germany should present significant opportunities for both countries, especially in the manufacturing sector. For Brazil, transfer of German knowledge and technology could help firms become more efficient. For Germany, Brazil presents not just an attractive market but also a potential source of inputs (those incorporating labor and natural resources) and even technology in areas where Brazilian firms have found niches (e.g. biofuels, aerospace).

Supply chain integration is also linked to another important new theme in international trade: trade in services. The production of final goods in a modern, globally integrated industry incorporates not just a large number of components or intermediate goods but also a range of services, many of which can be globally sourced. These tradable services include diverse activities such as transport, logistics, IT, finance, insurance and design. In addition to such business-oriented services, tourism is also a growing tradable service.

As trade in services has grown, Brazil has not fully taken advantage of the resulting opportunities. This is no surprise, as business services tend to be closely linked to supply chain integration. Germany however, is also relatively poorly integrated in global services trade, as many important sectors remain closed. Hence, services present an opportunity for both countries to deepen integration with each other as well as with the rest of the world. Tourism also presents a bilateral opportunity. Brazil, with its plentiful sunshine and lush beaches, should be able to tap into the market for sun-hungry Germans, rivaling the Caribbean and Southeast Asia as a warm-weather tourist destination. By the same token, Germany has so far missed out on the dramatic increase in Brazilians traveling abroad. Given that many Brazilians are of German descent and the country has much to offer in terms of history and culture, there is a great opportunity to attract more tourists.

Another interesting area of opportunity for integration between Germany and Brazil is in the area of green energy and biofuels. Both countries are leaders in subsectors in this area but cooperation has been limited. Brazil has been leading in the development of ethanol made from sugarcane (a more efficient source than corn or other plants) and related technologies such as flex-fuel engines (that run on gasoline, ethanol or any mixture of the two) and electricity from the biomass byproducts of sugarcane (rather than being net consumers of electricity, Brazilian sugar mills actually supply significant amounts to the grid). Germany, meanwhile, has been a leader in the development of solar panels and wind turbines, which are clearly an attractive energy option for Brazil. However, instead of benefiting from each other's strengths, each country has taken a protectionist approach towards the other's products, with costs for both economies as well as the environment. Given that Brazil and Germany both aspire to be leaders on the global climate agenda, greater cooperation in this area should be a political priority. In the 20th century, the two countries cooperated in the development of nuclear energy, with the German firm Siemens supplying the reactors for Brazil's nuclear plant in Agra dos Reis. Why not embark on similar cooperation on energy sources for the 21st century?

Chapter II:

Capital Flows and Investment

1. Financial Flows
2. Foreign Direct Investment and Portfolio Investment
3. Macroeconomic Stability and International Financial Flows

Chapter II: Capital Flows and Investment

This chapter outlines the key issues influencing financial flows and investment between Germany and Brazil. Section 1 reviews the main factors influencing international financial flows, as revealed by the relevant literature, while Section 2 describes and analyzes data on direct foreign investment and international portfolio investment, with a particular focus on Brazil and Germany. Section 3 analyzes the link between macroeconomic stability and international financial flows, particularly in light of recent Brazilian exchange rate volatility, and concludes by briefly considering the potential benefits of macroeconomic policy harmonization.

1. The Microeconomics of International Financial Flows

The financial decisions of foreign investors are influenced by expected risks and returns, as is the case of any financial flow. The economic role of international financial flows is to transfer savings between countries. According to Lucas (1990), one should thus expect large capital flows from rich to poor countries, given that the lower ratio of capital per worker in poor countries would imply larger marginal returns to capital. However, as Reinhart and Rogoff (2004) noted, external debt per capita does not seem to follow this logic. Rather, the larger the income per capita of a country, the larger tends to be its external debt per capita. Gertler and Rogoff (1989, 1990) show that there is evidence of expanding capital flows from poor to rich countries, while Alfaro et al. (2003) present evidence of increasing direct foreign investment in countries with high per capita income.

Finally, Reinhard and Rogoff (2004) found that a group of 20 or so emerging-market countries receive the bulk of financial flows from richer countries, with the remaining developing countries generally receiving funds through aid and direct foreign investment. These empirical disagreements with Lucas's expectations regarding capital flows have come to be known as the "Lucas Paradox." While this could be partially related to the phenomenon of the "home bias puzzle" (reviewed in Lewis, 1999, this refers to the preference of investors to invest in their country of origin), there are several additional factors involved, some of which are discussed below.

Scarcity of Human Capital and Natural Resources

Contrary to Lucas's postulation, the returns to capital are not necessarily higher in poor countries. One key reason is that equipment and physical capital in general are complementary factors of production to human capital and natural resources. Consequently, the relative scarcity of human capital in many poor countries and of natural resources in wealthier ones, decreases the marginal product of physical capital.

This contention is supported by Caselli and Feyrer (2007), who developed a methodology to correct the marginal product of capital (MPC) that accounts for its complementarities with human capital and natural resources. They find that although there are significant differentials in calculated MPC between rich and poor countries according to "naïve" methodologies (11.4 in rich countries against 27.2 in poor ones), corrections for the complementarities between capital and human capital as well as natural resources largely equalizes them (8.4 for rich countries against 6.9 for poor countries), suggesting in fact that rich countries may have a somewhat higher MPC.

If capital, despite being the relatively mobile factor of production, must have complementary human capital (and/or natural resources), one may ask whether migration of workers could not be an important force equalizing marginal products. The recent intensification of international labor migration suggests that it is, to some extent, but that there are still restrictions and constraints. These include conflicts (religious, ethnic) and pecuniary and non-pecuniary costs of migration (legal restrictions, differences of cultural values, habits, loss of relations and network, lack of information etc.).

Brazil has ample natural resources, but its dearth of human capital may discourage potential investors, at least in the short and medium terms. The country's education system does not provide the necessary number of qualified workers, nor has migration recently been able to fill this gap.

Institutional Quality

Another factor behind the relative scarcity of capital in poor countries is the increased risk of investment. Papaionnau (2004, 2009) examined the financial flow data from banks of 140 (industrial, emerging and underdeveloped) countries. His main finding was that institutional quality is a key correlate to foreign bank lending. A country with poorly performing institutions, including weak property rights and high risks of expropriation, legal inefficiency, bureaucratic corruption, etc., inhibits foreign bank lending. In effect, these factors act as (uncertain) taxes, restricting capital inflows. On the other hand, political liberalization, privatization, an independent banking system and similar structural characteristics enable an economy to attract substantially more foreign bank capital.

Papaionnau (2009) also tested for informational asymmetries and ethno-linguistic ties as control variables (see also Glick and Rose, 2002), but the institutional factors remained prominent. Lane (2003) arrived at a similar conclusion regarding equity and direct foreign investment; his research suggested that the poor quality of institutions and the prevalence of corruption inhibited foreign investment. Somewhat to the contrary, Lucas (1990) dismisses the importance of the political risk factor, citing the example of India prior to 1945. During that period, India was still subject to British rule and, consequently, to the same political risk, yet its capital labor ratio remained below that of Britain.

In line with the results on broadly defined institutional quality, Reinhart and Rogoff (2004) focus on serial sovereign default and its effects on reputation (which may be considered an outcome of poor institutional quality) as an inhibitor of capital inflows. Table 1 below shows the number of defaults (or debt restructurings) during the 20th century for several countries.

Table 1: Number of defaults* during the 20th century, selected countries

Country	Number of Defaults Episodes*
Ecuador, Uruguay and Liberia	6
Brazil and Peru	5
Venezuela, Austria and Yugoslavia	4
Mexico,Colombia, Argentina, Bulgaria, Russia and Poland	3
Germany, Chile and China	2
* Or debt restructuring	
Source: Reinhart and Rogoff (2004).	

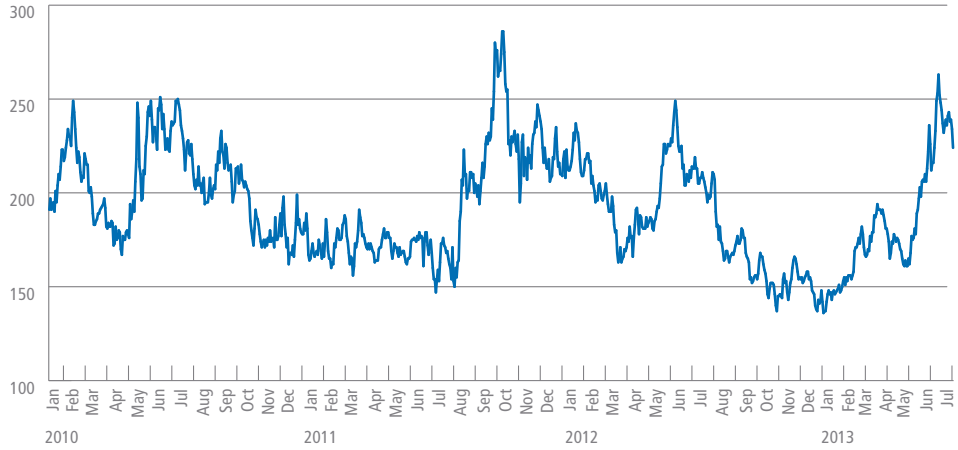
The importance of serial default led Caselli and Feyrer (2007) to suggest that in order to keep its creditworthiness and attract foreign savings, a country with a past default history should maintain foreign debt at a maximum ratio of 30 percent of GDP, and that this ratio should be prudently lowered if the public debt is too high. Table 2 shows values of these ratios for Brazil and Germany in 2012.

Table 2: Gross External Debt, Public Debt and GDP (2012)

Data	Brazil	Germany
Gross External Debt (as percent GDP)	19.6	168.2
Public Debt (as percent GDP)	58.8	81.9
GDP (US$ billion)	2252.7	3399.6
Source: World Bank, IMF and CIA.		

A salient conclusion is that risk (chiefly stemming from weak institutions and inadequate policies) is a major factor influencing net capital inflows. Risk evaluation agencies rate sovereign risk for many countries. In July 2013, Standard & Poor's rated Brazil as BBB/negative/A-2 and Germany as AAA/stable/A-1+. Standard & Poor's March 2014 downgrade of Brazil to BBB- confirms this negative tendency. The "negative" and "stable" classifications reflect the rating agency's outlook regarding further rating action. Another measure of the overall Brazilian risk is the interest rate spread between Brazilian debt and US Treasury securities, known as EMBI +. Figure 1 shows the recent evolution of this difference. It fluctuates considerably, and there has been a short-run upwards trend since February 2013 (an increase of 100 basis points means that the interest rate difference increased one percentage point per year).

Figure 1: Brazilian risk as measured by EMBI + Risco Brasil



Source: JP Morgan.

The literature and evidence on international capital flows suggest that the typical Keynesian investment theory assertion, that decreasing real interest rates would boost investment, is perhaps too simple. Risk (stemming many times from weak or weakening institutions or inadequate policies) and shortage of human capital and natural resources are very important factors as well. Regarding Brazil, besides the current shortage of qualified workers in the country (a factor complementary to capital), the policy framework coincided with a generalized perception of weakening institutions and inadequate macroeconomic policies, as reflected in the recent movement shown in Figure 1.

2. Direct Investment and Portfolio Investment from Abroad, in Brazil and in Germany

Foreign Direct Investment

Data on Brazil's and Germany's stock of foreign direct investment (FDI) are presented in Tables 3, 4 and 5.

Table 3: Direct Foreign Investment Position in Brazil, by country of origin, end of 2011

Rank	Country	US$ Billion
	Total	688.6
1	Netherlands	171.2
2	United States	119.3
3	Spain	92.4
4	France	34.2
5	Japan	34.2
6	Luxembourg	32.7
7	United Kingdom	20.4
8	Mexico	17.1
9	**Germany**	**16.7**
10	Cayman Islands	16.5

Source: Coordinated Direct Investment Survey (CDIS) – IMF.

Table 4: Direct Foreign Investment Position of Germany in other countries, end of 2011

Rank	Country	US$ Billion
	Total	1,206.3
1	United States	221.5
2	United Kingdom	126.5
3	Netherlands	113.5
4	Luxembourg	101.6
5	Belgium	55.3
6	France	52.5
7	China, P.R.: Mainland	44.2
8	Austria	43.0
9	Italy	42.0
10	Spain	33.9
17	**Brazil**	**16.3**

Source: Coordinated Direct Investment Survey (CDIS) – IMF.

Table 5: Direct Foreign Investment Position in Germany, end of 2011

Rank	Country	US$ Billion
	Total	915.3
1	Netherlands	229.3
2	Luxembourg	130.9
3	United States	91.4
4	France	83.4
5	Switzerland	79.1
6	United Kingdom	75.5
7	Italy	46.5
8	Austria	30.9
9	Japan	20.6
10	Sweden	19.7
161	**Brazil**	**0.3**

Source: Coordinated Direct Investment Survey (CDIS) – IMF.

Table 6 shows the stock of FDI relative to GDP of the world's 20 largest economies. The stock of FDI in these countries corresponds to 28.3 percent of their combined GDP, while their stock of FDI abroad corresponds to 32.1 percent. As a whole, this group of countries received and sent abroad about the same amount of direct investment. Brazil (and other emerging markets such as Mexico) received FDI in line with the overall average, but they sent abroad a figure quite below the average. Germany received slightly below the average and sent abroad a sum above it. Japan, India and South Korea may be considered relatively closed economies in terms of receiving FDI.

Table 6: Stock of Foreign Direct Investment (FDI) as percent of GDP (for the 20 largest GDP countries)

RANK (based on GDP)	Country	1. Stock of FDI in the country as percent of GDP	2. Stock of FDI of the country abroad as percent of GDP	1 + 2
1	United States	16.2	26.5	42.7
2	China	23.2	0.0	23.2
3	Japan	3.8	16.2	19.9
4	**Germany**	**26.9**	**35.5**	**62.4**
5	France	37.2	61.1	98.4
6	United Kingdom	43.7	70.8	114.5
7	**Brazil**	**30.6**	**6.8**	**37.4**
8	Russian Federation	22.6	18.0	40.6
9	Italy	16.9	25.8	42.7
10	India	9.7	3.3	13.0
11	Canada	32.2	36.3	68.5
12	Australia	33.9	22.6	56.5
13	Spain	43.8	44.9	88.7
14	Mexico	29.8	8.4	38.2
15	Korea, Rep.	11.8	15.2	27.0
16	Indonesia	21.2	0.0	21.2
17	Turkey	14.4	3.3	17.7
18	Netherlands	443.1	550.8	993.9
19	Switzerland	102.0	162.9	264.9
20	Sweden	64.7	67.2	131.9
OVERALL		**28.3**	**32.1**	

Source: Coordinated Direct Investment Survey (CDIS) – IMF.

The examination of Tables 3, 4, 5 and 6 allows several conclusions:

1) The total stock of FDI in Brazil, relative to GDP, is 31 percent. For Germany, the figure is 27 percent. The figures are close to each other, suggesting, as argued by the authors mentioned in the previous section, that emerging economies are not necessarily preferred recipients of FDI. Rather, rich countries receive a sizable portion of it.

   The figures in the final column of Table 6 are a measure of the openness of each economy with respect to FDI. It is an important measure, since the stock of FDI is accumulated over

many years. Consequently, it reflects information regarding the long-run historical behavior of the country with respect to FDI—i.e., information about its economic relationship with other countries and, particularly, its absorption of foreign capital and technology.

The coefficient of correlation between the measure of openness described in Table 6 (last column)—and a more traditional measure of openness, such as (import + exports)/GDP—is 0.368. And a "Student t" statistical test shows that the correlation is significantly different from zero at the 95 percent confidence level. The conclusion is that countries that are open to trade tend to be open to FDI (and vice versa).

According to the FDI openness criteria, as a recipient country Brazil ranks ninth among the 20 largest economies. Germany ranks 11th.

2) Assuming an income/capital ratio of 20 percent, the total capital stock in Brazil would have a value of US$11.3 trillion. Consequently, considering Table 3, the value of the stock of foreign direct investment in Brazil would be about six percent of the value of the total capital stock in the country. If the income/capital ratio were 25 percent, the percentage of the stock of foreign direct investment in Brazil would be around 7.5 percent of the total stock of capital.

   For Germany, the ratios for each hypothesis would be slightly smaller: 5.5 percent and 6.9 percent, respectively. Consequently, there is not much difference between a high-income-per-capita country such as Germany and a medium-income-per-capita country such as Brazil. The overall figures (see the last line of Table 6) also suggest that, making similar assumptions about the income/capital ratio for all the 20 countries, the percentage of the stock of foreign direct investment to the total capital stock, for an average country of the group, would be around six or seven percent.

3) The stock of German direct investment in Brazil is 1.4 percent of the total German direct investment abroad. Through the years, it has been the US—a developed country—that has been the principal recipient of German direct investment (18.4 percent of the total, representing US$ 119 billion); data from the same source show that the US owns 10 percent (worth US$ 91.4 billion) of the stock of FDI in Germany. Brazil, with US$260 million of total direct investment in Germany, is the globe's 161st foreign direct investor in Germany. Given that the total stock of Brazilian direct investment abroad is worth US$154 billion, Brazilian direct investment in the capital stock in Germany is quite small.

4) Table 7 (derived from the previous tables) shows the percentage distribution of FDI in Brazil, by country of origin.

Table 7: Distribution of the stock of foreign direct investment in Brazil, by country of origin, end of 2011

Rank	Country	Percent
1	Netherlands	24.8
2	USA	17.3
3	Spain	13.4
4	France	5.0
5	Japan	5.0
6	Luxembourg	4.8
7	UK	3.0
8	Mexico	2.5
9	**Germany**	**2.4**

Source: Author's Calculations based on CDIS/IMF Data

The stock of direct investment of Germany in Brazil amounts to 2.4 percent of the total, and ranks ninth, behind the Netherlands, the US and Spain (see the footnote on p. 4 for an explanation of the Dutch figure).

Foreign Portfolio Investment

Figures on the total stock of foreign portfolio investments in Brazil–and its distribution by country–appear in Table 8. Total portfolio investment remains less than the total value of FDI in the country. Germany is responsible for one percent of this portfolio investment, far behind the US, the largest investor with 39 percent of the total. (The over-representation of countries such as Luxembourg and the Cayman Islands likely reflects those countries' status as tax havens.)

Table 8: Portfolio Investment Liabilities of Brazil to other countries, end of 2011

Rank	Country	US$ Billion
	Total	497.1
1	United States	196.2
2	United Kingdom	106.0
3	Luxembourg	53.0
4	Japan	28.9
5	Cayman Islands	17.4
6	Netherlands	11.8
7	Canada	11.7
8	Ireland	11.7
9	Norway	7.9
10	France	7.8
11	**Germany**	**5.0**

Source: Coordinated Direct Investment Survey (CDIS) – IMF.

Table 9 shows German portfolio investments in other countries (which total about twice the amount of German direct investments abroad). Luxembourg is the No. 1 recipient, while Brazil accounts for only 0.2 percent of the total.

Table 9: Portfolio Investment Assets of Germany in other countries, end of 2011

Rank	Country	US$ Billion
	Total	2,380.4
1	Luxembourg	301.5
2	France	237.3
3	Netherlands	202.5
4	United States	202.2
5	United Kingdom	173.7
6	Italy	163.7
7	Spain	125.3
8	Ireland	92.0
9	Austria	53.8
28	**Brazil**	**5.0**

Source: Coordinated Direct Investment Survey (CDIS) – IMF.

Table 10 makes a comparison of the Brazilian and the German stock positions of foreign direct investments and portfolio investments, as recipient and investor countries. Again, German portfolio investment in Luxembourg is significantly overstated as the funds do not stay in Luxembourg, but are only routed through the country.

Table 10: Stock of Foreign Direct and Portfolio Investment; Brazil and Germany as recipient and investor countries, end of 2011

	Brazil Percent of GDP		Germany Percent of GDP	
	Recipient	Investor	Recipient	Investor
Foreign Direct Investment	30.6	6.8	26.9	35.5
Portfolio Investment	22.1	1.3	82.9	70.0

Source: CPIS/IMF and CDIS/IMF

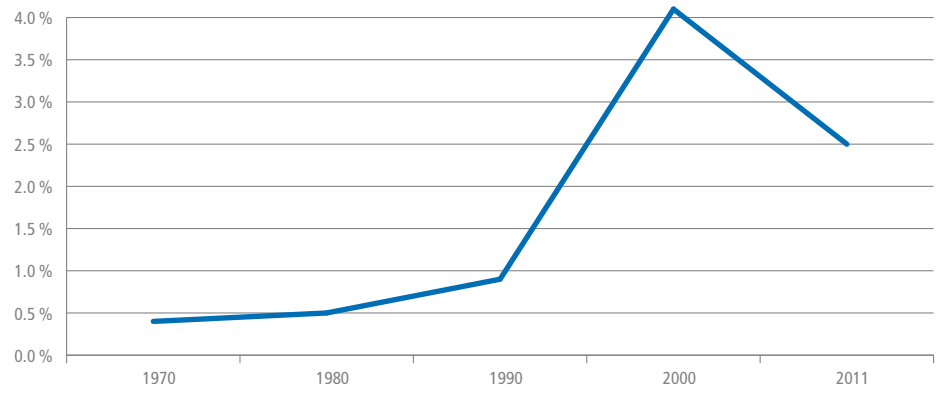
Table 10 shows that, overall, Brazil receives far more portfolio inflow than it invests abroad. While Germany does invest heavily abroad, it is still a net recipient of portfolio investment.

3. The Macroeconomics of International Financial Flows

By sharply decreasing costs of communication and transportation, and the general globalization process has led to an extraordinary expansion of trade and of capital flows of all kinds. Figures 2 and 3 show the evolution of FDI in the world and the evolution of foreign trade for the Brazilian and German economies, respectively.

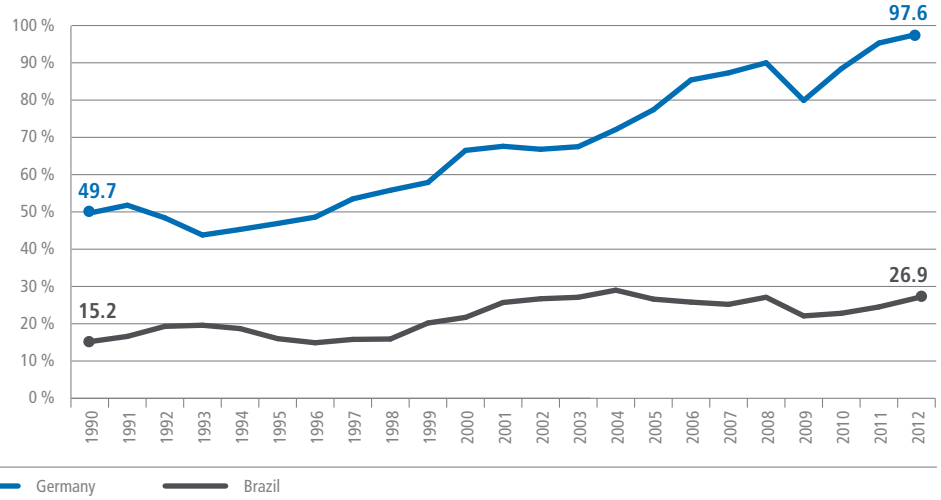
The figures reveal the clear expansion in trade and capital flows (FDI):

Figure 2: World Foreign Direct Investment flow per year as percent of World GDP



Source: World Bank. | BertelsmannStiftung

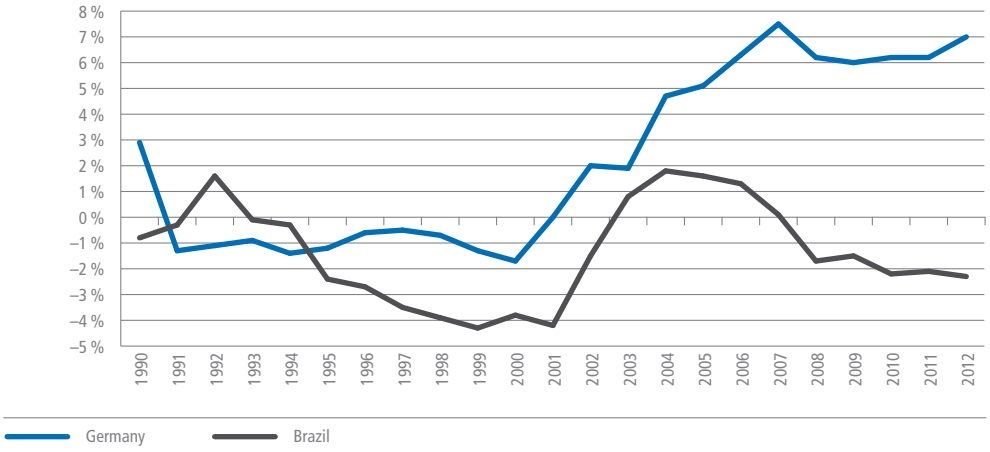
Figure 3: (Imports + Exports) as percent of GDP, Brazil and Germany



Source: World Bank. | BertelsmannStiftung

Net recipients of financial flows may run current account deficits (i.e., they may receive a net positive excess value of goods and services from abroad, allowing them to sustain a higher level of investment and, consequently, obtain a higher potential GDP growth rate). Countries that are suppliers of savings run current account surpluses, transferring abroad goods and services now and expecting to receive future repayments of goods and services (see Obstfeld and Rogoff, 1996). Figure 4 shows that, during the past 20 years, Brazil has absorbed more foreign savings than Germany: Germany has been an exporter of savings since 2000, and particularly in the last five years, the German current account was in considerable surplus while Brazil's was in deficit.

Figure 4: Current Account Balance as percent of GDP; Germany and Brazil.



Source: World Bank.

BertelsmannStiftung

For its part, Brazil needs foreign savings to increase its relatively low fixed investment/GDP ratio, which oscillated around 17 to 18 percent, well above the low level of domestic savings (14 to 15 percent of GDP). Table 11, below, shows the total fixed investment in Brazil as a percent of GDP. The ratio has been somewhat below 20 percent during the first decade of the current century. By comparison, in China it has been around 50 percent. The Brazilian investment to GDP ratio is two to five percentage points lower than the same rate in several other Latin American countries, including Chile, Argentina, Peru, Colombia and Mexico.

Table 11: Fixed Investment as percent of GDP in Brazil

Year	Fixed Investment
2000	16.8
2001	17.0
2002	16.4
2003	15.3
2004	16.1
2005	15.9
2006	16.4
2007	17.4
2008	18.7
2009	16.7
2010	18.4

Source: IpeaData

International financial flows are the crucial transmission mechanism of savings among countries. These flows finance current account deficits. Yet the recent and substantial expansion of international capital flows between countries and currencies has raised the question of whether these flows are a threat to macroeconomic stability. The fear is that a sharp, possibly unwarranted, redirection of these flows could overstate both the upside and downside of a country's economic conditions.

Thus, the key question is whether the free flow of capital is on the whole more of a benefit for the countries involved than it is a detraction. To answer that question, we turn to Professor Jagdish Bhagwati and his well-known article entitled "The Capital Myth" (1998). Bhagwati favors free trade in goods and services, but he argues that totally liberalized capital movements—that is to say, capital of any sort and of any amount—have disadvantages that are not present in the case of free trade.

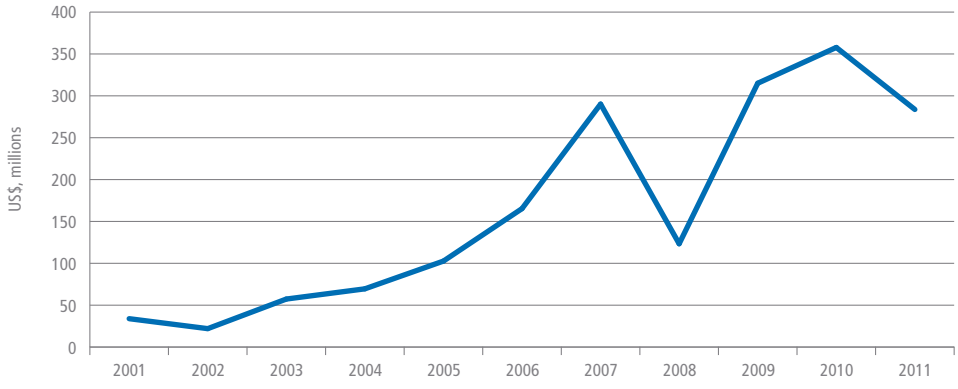
The problem inherent to portfolio capital flows is that they are subject to contagion and herd behavior, which is at times driven by panics, manias and crashes. Destabilizing speculators, defined as those who bet against a given country's economic fundamentals, may realize huge profits as the speculative behavior itself changes the fundamentals. Economic models with speculative behavior have different equilibrium positions. Consequently, the well-known argument of Milton Friedman (1953), that destabilizing speculation would eventually punish the speculators with losses once the underlying fundamentals reassert themselves, is theoretically incorrect. Speculation simply changes the fundamentals in models with speculation. Researchers such as Triffin (1957), Aliber (1962), Obstfeld (1986) and others have shown this while also raising the possibility of multiple economic equilibria. Moreover, free capital flows in the presence of trade distortions (tariffs, quotas, etc.) may not be a second-best solution, according to arguments developed by Cooper (1998, 1999).

Not all forms of investment cause these kinds of risks. In fact, the major gains from capital flows to developing countries (including the acquisition of skills and technology) may be obtained by

encouraging direct foreign investment. This would imply that a successful policy grants free exchange convertibility only to firms' earnings and capital. Banks, firms and common citizens should not have the ability to freely withdraw short-term capital from the country in whatever magnitude they like. Neither should they be able to make short-term loans, which can increase sharply in the presence of unsustainable asset price movements and can reinforce economic instability.

The case of Brazil presents an illuminating example of instabilities related to capital inflows. In particular, in Brazil we find interesting results when these flows interact with the political system, making for an excellent political economy case study. Capital flow volatility has been an important factor behind the increased volatility of the domestic exchange rate for the past decade. For example, the shock stemming from the September 2008 global crisis (seen in Figure 5), acting through the flight of portfolio investments to other countries, was followed by an increase of roughly 50 percent in the market exchange rate of the Brazilian real to the US dollar in less than a month. Beyond inflationary pressure, this currency movement caused problems for companies and banks with dollar liabilities, with several such firms ending up going bankrupt. Later in the same year, when the extent of the crisis became clearer (and the relatively solid financial position of Brazil became well-known), the exchange rate of the real to the dollar returned to its previous level.

Figure 5: Portfolio Investment Liabilities of Brazil to other countries. Stock of Equity Securities from 2001–2011, reported by Brazil



Source: CPIS/IMF.

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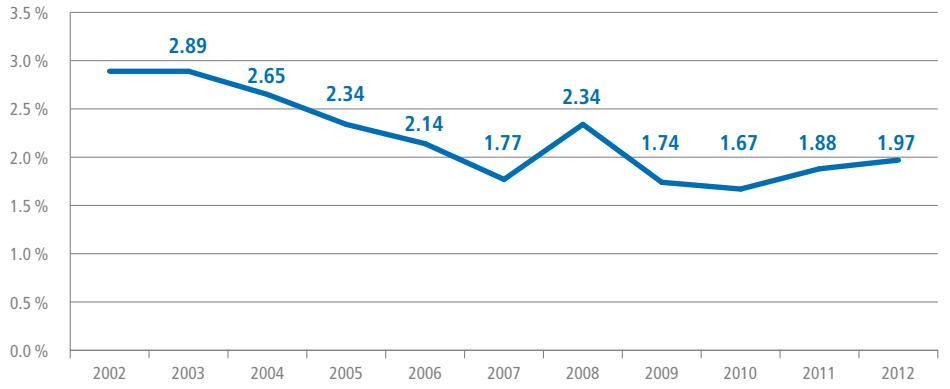
Capital inflows were attracted by the high interest rates in Brazil (these high rates were a holdover from the 1990s, when Brazil faced extremely high domestic rates of inflation). Figure 7 below shows the evolution of the money market interest rate in Brazil, while Figure 6 shows the end-of-the-year exchange rates.

Figure 6: Exchange Rates R$/US$



Source: IPEAdata.

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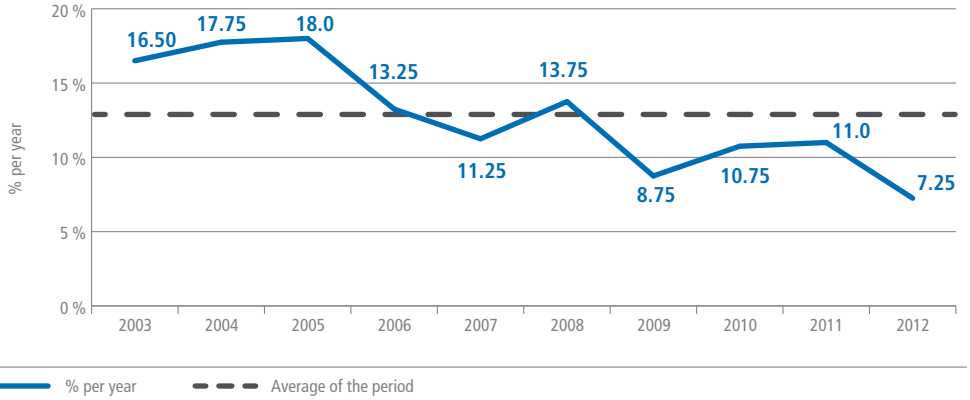
Figure 7: Brazil Money Market Interest Rate (SELIC), 2003–2012



Source: IPEAdata.

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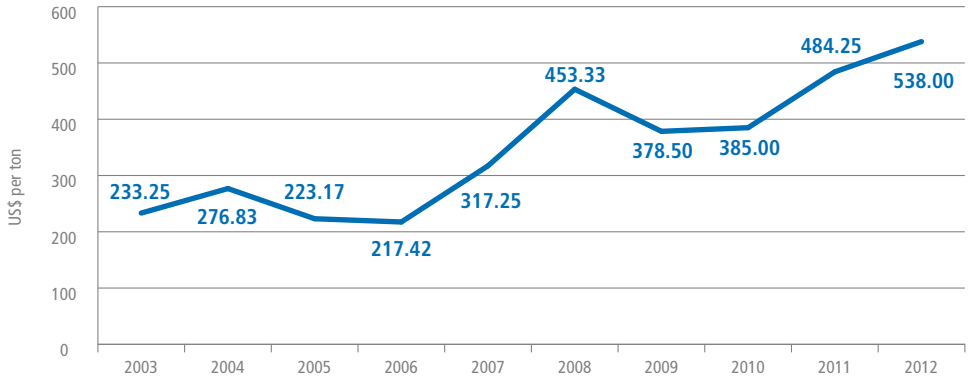
The substantial appreciation of the real in this period caused problems for the export sector. Moreover, the average Brazilian rate of inflation in the same period was greater than the rate of inflation of Brazil's more important trading partners. Brazilian rates of inflation reached an average of just under six percent in 2003–2013, consistently reaching the ceiling of monetary policy targets and far surpassing rates in trade partner countries such as Germany (1.82 percent in that period) and the US (2.40 percent). Brazilian industrial exports took a serious hit from the combination of nominal exchange appreciation and higher inflation, as it implied a significant appreciation of the real.

The Brazilian government reacted to the appreciation of the real by buying foreign currency in the exchange markets in order to avoid devaluation. As a result the international reserves of the

country increased substantially, from US$49 billion to US$373 billion, over the period 2003–2013. Yet the acquisition of international reserves could not prevent an appreciation and was also costly to the government in terms of its domestic public debt and interest. The foreign currency reserves, when invested in international banks, did not receive comparable interest payments. Additionally, since the foreign currency continued to devalue relative to the real, the Brazilian government suffered huge exchange losses on its holdings of foreign currency reserves (it is difficult to assess precisely how much, but such losses are likely to have exceeded 100 billion reais).

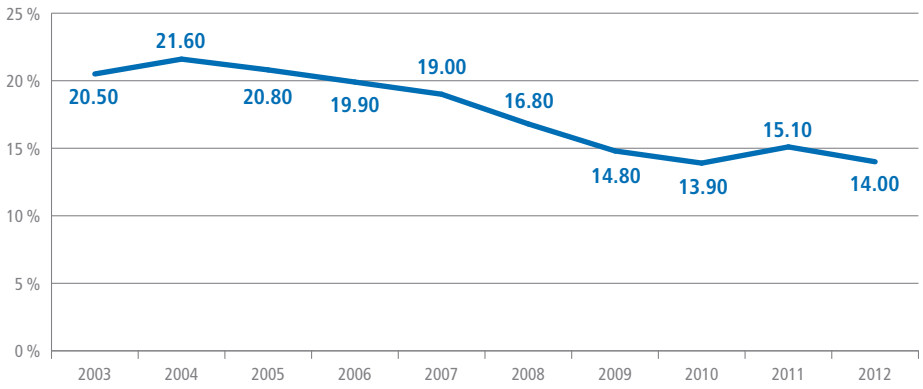
As the real continued to appreciate in real terms, Brazilian industrial exports became increasingly uncompetitive. Commodity exporters were compensated by abnormally high commodity prices (see Figure 8), but the same did not happen to industrial exporters (see Figure 9).

Figure 8: Soybean prices per ton



Source: IPEAdata. | BertelsmannStiftung

Figure 9: Industrial Exports ÷ Total Industrial Production



Source: IPEAdata. | BertelsmannStiftung

The fiscal costs of the international reserves and the continuous appreciation of the real finally led to a 2012 government policy of sharply cutting domestic interest rates to avoid attracting foreign financial capital, devaluing the real, and boosting industrial exports and investments. The concern with this approach, however, is that lower domestic interest rates may fuel increased inflation, preventing the desired depreciation of the exchange rate.

To avoid the resurgence of inflation, the Brazilian government intervened to curb energy prices (oil and electricity) and postponed other price increases (in public transportation, for instance). Besides these actions, the government began engaging in what was termed "creative accounting" (manipulating the public-sector budget results and using nonstandard practices such as deferring spending) in order to stay within the original budget surplus target zone. This demonstrates that huge international reserves do have a price, in terms of lower budget surplus or deficits.

These interventionist policies and the diminished commitment of the central bank to strict inflation targets have caused increased uncertainty for investors in the Brazilian economy: Investment in 2012 declined four percent relative to 2011.

In conclusion, allowing free international capital flows set a chain of events in motion which, paradoxically, led to a decrease of investment and of the productive capacity growth of the Brazilian economy. Speculative capital flows have been particularly problematic for Brazilian policymakers. Such flows are also caused, however, by the substantial difference of economic policies among interacting countries. Their interaction leads to a mutual influence that should be taken into account by policymakers in each of the countries. In fact, the lack of policy coordination may cause an overall sub-optimum decision-making process, typical of non-cooperative games.

If there is zero policy coordination, then controls on short-run financial flows may be necessary for a country to defend itself against the eventual negative externalities coming from abroad. Conversely, if there is enough policy coordination, then a lack of capital controls may be compatible with stability and growth. If the major economies of the world adopt macro policies that treat their emerging partners as passive adapters, the political economy and the policymaking process may make capital controls desirable for poor and emerging economies.

Chapter III:

Recommendations

1. A Focus on Bilateral Direct Investment
2. Harmonizing Monetary Policy
3. Towards an Understanding on Migration
4. Finding the Common Ground on Trade Policy
5. Brazil and Germany as Leaders in a EU-Mercosul Free Trade Agreement

Chapter III: Recommendations

German-Brazilian economic relations may be growing, but they remain far from their overall potential. In some cases, differing policy approaches prevent both countries from fully exercising their comparative advantages or engaging in mutually beneficial exchanges. In other cases, membership in political and economic blocs constrains both countries' abilities to expand their economic relations where it is in the national interest.

Given the deep-seated and often political nature of these obstacles, concrete and actionable recommendations can be elusive. Nevertheless, this paper indicates that there is significant common ground shared between Brazil and Germany, and there are concrete recommendations that can help both countries build upon this common ground.

These recommendations aim to deepen those economic relations which are less exposed to sovereign policy risks and that hinge more on the knowledge and the agency of major economic actors. At the same time, the recommendations do not shy away from the difficult yet important policy debates that remain. Instead of attempting to define correct or incorrect policies, we seek strategies to make differing policies mutually compatible.

In particular, this section offers recommendations for 1)fostering bilateral direct investment; 2) harmonizing monetary policy, 3)facilitating migration as a mechanism for spurring economic links, 4)finding common ground on trade policy, and 5)encouraging Brazil and Germany to assume leadership roles in advancing an EU-Mercosul FTA.

1. Prioritizing Bilateral Direct Investment

While a firm consensus can be hard to find on whether open capital flows benefit a given economy, there is greater room for agreement on FDI. Moreover, in contrast to liberalizing trade, which requires a time-consuming and cumbersome negotiation process, a deepening of bilateral FDI can be achieved on a project-by-project basis. Thus, FDI is a fertile topic for further analysis and debate because it is relatively resilient to political processes. Additionally, given the link between FDI and international trade, especially as it pertains to "new trade issues" (intra-industry trade, supply chain integration, intellectual property rights), openness to FDI should support increased trade openness (share of exports and imports in the economy).

One key opportunity is for German companies to build industrial plants in Brazil, thus taking advantage of the still-growing Brazilian consumer market that is ready for products that make use of "German engineering" but that could be produced locally in mass quantities.

Likewise, Brazilian R&D teams—whose projects may never come to fruition given constraints in Brazil's skilled-labor market—might benefit from basing their operations in Germany. Medium and long-term opportunities for local (German, Brazilian) industries might also be created by generating complementary industries abroad (Brazil, Germany), either from the fragmentation of industrial processes or from more complex scenarios such as brand effects and network externalities.

Yet these linkages do not always emerge organically. Both Brazil and Germany can take steps to encourage bilateral FDI, by drawing attention to the opportunities in both countries. In order to expand direct investment between Brazil and Germany, we suggest that both countries promote partial or full exemption on corporate taxes and import duties between them. We also call for the bilateral investment treaty signed by Brazil and Germany in 1995 to be ratified, as it would provide investors with confidence that their rights will be protected.

There is also the potential of fruitful collaborations emerging between similar institutions, such as the Brazilian development bank (Banco Nacional do Desenvolvimento Econômico e Social, or BNDES) and the German development bank (KfW Entwicklungsbank). In particular, these organizations might work together to facilitate German investment in Brazilian infrastructure—an area where we see urgent demand on the Brazilian side and particular expertise on the German side.

Finally, an annual conference featuring investors and policymakers could facilitate connections while also offering a forum to harmonize regulatory and legal standards. Initially, such a conference could address fundamental questions such as why German investment in Brazil (measured as a percentage of GDP) significantly lags that of other countries including the US and Spain. The German-Brazilian Business Day, organized annually by the Federation of German Industries (BDI) and its Brazilian counterpart, the National Confederation of Industry (CNI), could be expanded into a broader conference bringing together the business community with policymakers and academics.

2. Harmonizing Monetary Policy

In order to fully leverage the potential of bilateral German-Brazilian investment, the two countries must reconcile their differing perspectives on capital controls.

In general, Germany supports free capital markets and rejects capital controls. Germany welcomes inward FDI because such investments provide new jobs. An interest in outward FDI stems from a desire for improved access to foreign markets. Given its export surpluses, Germany seeks investment opportunities abroad—both in terms of FDI and portfolio investment. In contrast with emerging markets, Germany does not need high foreign currency reserves to prevent depreciations of its own currency. Also differing from developing economies, the German capital stock is already

relatively large. Hence the demand for domestic investment is comparatively small. Surplus revenue from foreign trade is spent on investment abroad rather than on currency reserves or domestic investments. Therefore, Germany supports very open FDI and portfolio investment policy.

Brazil, on the other hand, has suffered exchange rate volatility in recent years that has gone beyond what would be expected based on the underlying uncertainty about the real economy. Some Brazilian policymakers have argued that sharp variations of short-run capital movements may be caused by the lack of harmonization in international macroeconomic policies, as evidenced recently by emerging market turbulence caused by tightening monetary policy in the US. While US monetary policy is made exclusively with US economic interests in mind, it has global implications because the dollar is effectively a global currency. For similar reasons, Brazil and Germany should strive to maintain global macroeconomic stability, which may imply a greater degree of macroeconomic policy harmonization and coordination.

The Chilean model of capital control is a possible model for a medium ground compatible with the interests of both countries. Between 1991 and 1998, the Central Bank of Chile enacted the encaje, which required a fraction of the capital inflow to be deposited at the central bank for a certain period of time (typically a year), and without remuneration (unremunerated reserve requirement, or URR). The encaje was modified a number of times as policymakers sought to establish the correct balance. Alternatively, foreign investors could pay an upfront fee to the central bank and avoid the URR. Studies have suggested that the encaje succeeded in changing the maturity of capital inflows, allowing the government more room for independent monetary policy. Such a middle ground can be predictable enough for foreign investors. At the same time, phenomena such as adverse selection in favor of speculative capital can be avoided by eschewing interest rates as primary means of stabilizing capital flows. Ultimately, stability benefits all.

While some restrictions on the flow of “hot money” (short-term portfolio investment) might be warranted in Brazil, direct investment should be welcomed. Brazil has been quite successful at attracting FDI, mostly because of the attractiveness of its domestic market and abundance of natural resources. However, this market and resource seeking investment, while welcome, does not present the many opportunities in terms of technology transfer and increased productivity. Therefore investment in other areas such as manufacturing and professional services should be encouraged. To attract this kind of investment however, Brazil might need to become more open in areas such as trade and immigration which are necessary for production in these sectors.

3. Towards an Understanding on Migration

Demography, migration and labor can play a key role in the deepening of bilateral direct investment between Brazil and Germany. For example, Brazil faces deficits in the qualification of industrial workers. In contrast, Germany is likely to suffer from labor shortages due to demographic changes, despite being the home to the third-highest number of international migrants, according to the UN, of which only about a third come from the European Union.

In this context, Brazil and Germany should consider working on a mutually beneficial understanding on migration. The destination of FDI is often linked to the movement of people. The key condition for feasibility of an investment project is the internalized, often tacit knowledge of the chief investors and key specialists, which cannot be exported when building a business elsewhere. The feasibility of industrial processes may also hinge on specific qualifications that cannot be transferred easily, and may necessitate bringing along a more significant labor force. In addition, migration rules play an important rule for tradable services, especially terms of temporary movement of persons. Seizing the opportunity of extending bilateral trade in services therefore would benefit from a more open migration regime.

Such realities are not always obvious to policymakers who deal with the political land mine of migration. As Europe is mired in an economic slump, some of its citizens are increasingly wary of expanding non-European immigration into continental Europe. From the Brazilian perspective, the country is concerned about losing too many of its highly educated specialists (the so called “brain drain” effect). Also labor unions and associations of professionals in Brazil (e.g., medical associations) tend to oppose opening their professions to immigrants, and they can constitute a significant and organized special interest.

Thus, an agreement on migration that suits the deepening of bilateral investment should not be left to the extant political process, but understood as something that arises from the goals of investors and other economic agents involved in FDI projects in either country.

On a related (and perhaps less contentious) note, we recommend the promotion of cross-cultural exchange programs. Brazil remains an exotic and poorly understood destination in the eyes of many Germans, and the same is true for Germany as seen by Brazilians. As a result, foreign investment projects between the two can seem daunting. However, stemming from the German ethnic origins of a sizable portion of Brazil’s population, the southern Brazilian states (where people of German descent are concentrated) have interesting relations with several segments of German society, including twin and sister cities agreements, cross-collaborations among small and medium enterprises, technology exchanges between scientific and industrial research centers, and art and cultural festivals. We believe that an expansion of such cross-cultural programs, such as study abroad opportunities at the high school and university levels, could pay significant dividends down the road. Similarly, tourism is an area that could be expanded in both directions.

4. Finding Common Ground on Trade Policy

Our first recommendations focus on FDI because we believe these will be easier to achieve. However, given the complementary export portfolios and potential for mutually beneficial integration between the two countries, neither should shy away from the difficult dialogues required to deepen trade in goods and services.

We stress that foreign trade has a positive impact on the economic development of Brazil and Germany. Broadly speaking, the key policy here is that both countries should expand liberalization and reduce existing tariff and non-tariff trade restrictions, especially those most relevant for the Brazilian-German trade relationship. As said, outside the framework of an EU-Mercosul FTA, there is still much that can be done.

The European Union consistently maintains high taxes and non-tariff barriers on agricultural products, which play an important role for Brazilian exports. Germany should plead for a reduction of such barriers at the European level. Furthermore, Germany could push for changes in the EU's Common Agricultural Policy to reduce—or even abolish—subsidies for agriculture; a distortion of competition at the expense of developing and emerging countries such as Brazil. In exchange, Brazil should reduce its taxes on final industrial goods. Such measures would be beneficial for both sides.

A liberalization of trade flows should also facilitate the establishment of international supply chains linking industries in Germany and Brazil. Given that both countries are the most prominent manufacturing hubs in their respective regions, there should be significant gains made from supply chain integration.

Another aspect is that contemporary ways of production and consumption are not sustainable, especially due to the implied huge demand for natural resources and the volume of harmful emissions. In order to move to more sustainable patterns, an increase in the price of natural resources and carbon seems unavoidable. However, if a single economy takes a step to reduce the domestic demand for natural resources, at least in the short run this decision will have a negative impact on its international competitiveness, as production costs would likely increase.

How could Brazil and Germany reduce their demand and consumption of natural resources without losing international competitiveness and increasing unemployment? How can Brazil and Germany maintain their export capability and simultaneously promote environmental sustainability? Can an increase in services output and exports combine ecological sustainability with international competitiveness?

One answer could be for Brazil and Germany to cooperate in the development and dissemination of green technologies. Both countries have expertise in different forms of renewable energy. Instead of protecting their domestic industries, the countries should aim at learning from each other and

welcoming imports of products related to renewable energy. This includes allowing exports of sugarcane-based ethanol from Brazil to Europe.

These are crucial questions for the two countries. An ability to find a middle ground may help address them and aid in reducing the imbalances in the existing trade flows. Further research on this is undoubtedly required.

Last but not least, positive political signals should not be underestimated. The mutual importance of two countries to each other is emphasized, among other things, by visits of high-ranking politicians. Since taking office in November 2005, German Chancellor Angela Merkel visited China six times. During that same period, she visited Brazil just once, in May 2008.

5. Brazil and Germany as Leaders in EU-Mercosul Free Trade Relations

As evidenced by high-level meetings on both sides of the Atlantic, the EU and Brazil are keen on fast-tracking the free trade dialogue. However, progress has remained elusive. Certain members of Mercosul remain reluctant to liberalize trade at a moment when their countries face significant macroeconomic turbulence. Meanwhile, the EU maintains agricultural subsidies that could prevent Mercosul countries from leveraging their comparative advantages, thus disincentivizing cooperation.

Yet a window of opportunity exists. Uruguay and Paraguay have joined Brazil in expressing interest in rapidly advancing the dialogue. Meanwhile, officials from the European Parliament have insinuated that there may be "more room for maneuver" regarding EU agricultural subsidies this time around (Leahy, 2013). The entire process could benefit from strong leadership, both in private negotiations and in the sphere of public debate. As the largest countries from either side (both in terms of population and GDP), Brazil and Germany are particularly well positioned to assume this leadership role.

While trade with Brazil is currently less important for Germany, it presents an important opportunity, as South America is a region still poorly integrated with Germany. The German government should therefore be a strong proponent of such an agreement as work to counteract more protectionist EU governments.

Internally, Brazilian trade negotiators can work closely with the Mercosul partners who are more amicable to an EU-Mercosul agreement. If Brazil, Uruguay and Paraguay can agree on reasonable terms to present to the EU, this will put increased pressure on other Mercosul members to join. If Venezuela and Argentina continue to hold out, they risk pushing Brazil towards a two-track negotiation process that could redefine Mercosul.

Externally, Brazilian public and private leaders could mount a public campaign drawing attention to why they believe an EU-Mercosul FTA can tangibly benefit the Brazilian economy. While some leaders have spoken on the issue, a campaign with a consistent and long term strategy would be more effective in building momentum for the project.

Germany, for its part, must push the EU to adopt a less defensive position on agricultural imports in order to entice the South American bloc to join in the agreement. Germany should use its bargaining power within the EU in order to push for the dismantling of outstanding trade barriers.

At the same time, these important multilateral initiatives should not constrain the expansion of bilateral relations. In services sectors as well as in manufacturing, there is a wide scope for partnerships and preferential trade facilitation measures, within WTO rules, that can significantly boost bilateral flows. Coupled with a wise and mutually beneficial transfer of technology, they represent a pragmatic, results-oriented approach that can be started immediately.

Moving Forward: Finding the Common Ground

All of these recommendations imply that there is common ground between Brazil and Germany in terms of economic strategies, strengths and policies. By finding this common ground, the burgeoning relationship between the two can continue to grow.

As this “common ground process” advances, coordinated on multiple levels (among governments, institutions and investors), the conversation on trade, technology and other significant policy topics might become increasingly more feasible, and further mutually beneficial arrangements may be discovered.

As such, the relationship between the highly advanced German economy and the rapidly developing and dynamic Brazilian economy can truly become a relationship for the 21st century.

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About the Project "Global Economic Dynamics" (GED)

The Bertelsmann Stiftung established the project "Global Economic Dynamics" (GED) to shed more light on the growing complexity of international economic relationships. By using state-of-the-art tools and methods for measuring, forecasting and displaying the dynamics of the world economy, the project aims at making globalization, its economic effects as well as its political consequences more transparent and tangible.

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