

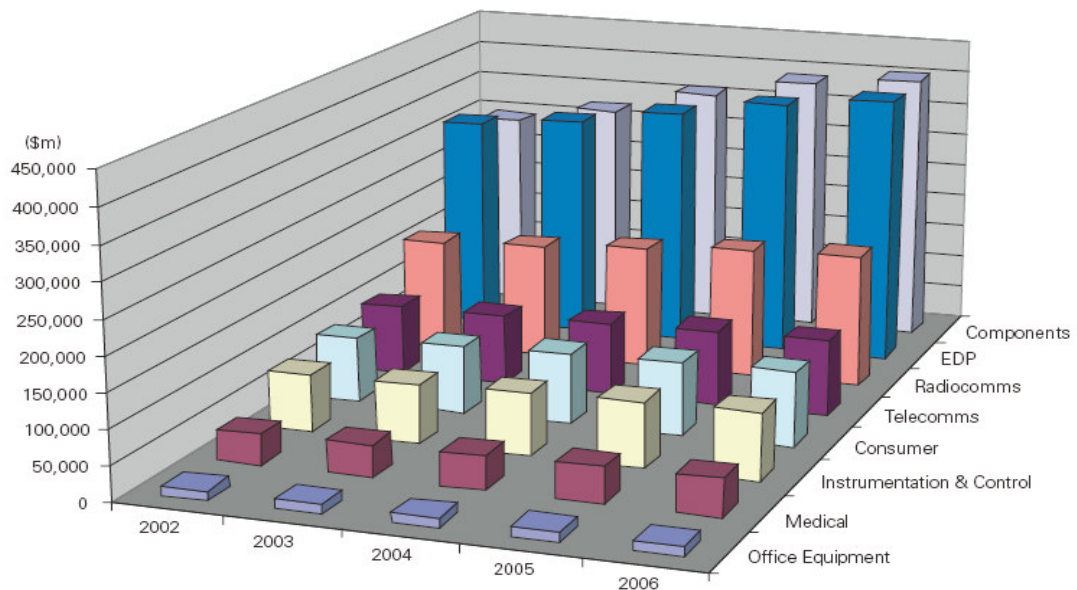


Emerging Market Research Report
October 19, 2007

Global Technology Market

The global technology industry is expected to continue to see growth into the next decade and beyond. Worldwide spending on information technology, computer hardware and software, and communications was \$4.63 trillion in 2006.¹ Global growth in technology is forecasted at 2-6 percent per year, with electronic components having the fastest growth of 9 percent annually. The following chart gives a sector-by-sector analysis of the growth of the technology markets from 2002-2006.

Projected growth by application sector 2002 – 2006



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Laser technology is spread across a number of industries. According to conservative estimates the global market for photonic components, systems, and optical consumer goods amounted to more than \$200 billion in 2005³, of which IT and communications technologies account for roughly 40 percent. Annual growth rates greatly exceed those of the overall technology industry. The laser sector grew by

¹ "Plunkett's InfoTech, Computers & Software Industry," Plunkett Research Ltd. Accessed: October 18, 2007. Available online at: <http://www.plunkettresearch.com/Industries/InfoTechComputersSoftware/InfoTechComputersSoftwareStatistics/tabid/172/Default.aspx>
² "Global Market Sector and Technology Opportunities," March 17, 2007. Available online at: <http://www.evertiq.com/news/read.do?news=7017&cat=8>
³ "Germany -Lasers/Photonics,": May 4, 2007. Available online at: http://www.buyusainfo.net/docs/x_5338561.pdf

an estimated 14 percent annually over the past 10 years. Prospects are promising for laser technology: experts expect the world markets to triple within the next 10 years.⁴

Although global technology markets are promising, opportunities in emerging markets for technology are even more so. The BRIC countries (Brazil, Russia, India, China) are optimum targets for investment because of their immense human capital, natural resource base, and low wage rates. We have focused on two of these strategic markets, Russia and Brazil, in our research for GSI Group Inc.

Emerging Market Private Equity Investment Climate

At this time, emerging markets, especially those of Eastern Europe and Latin America, provide ideal business climates for investment. The Emerging Markets Private Equity Association expects that **“over the next decade emerging markets will grow at over twice the rate of developed markets.”** PE investments in emerging markets have higher rates of return than those of Western Europe and the United States. PE returns in the US are currently only 17.2 percent, while they are 23.1 percent in Russia/Eastern Europe and 21.6 percent in Latin America.⁵ Limited Partner returns actually surpassed expectations in emerging markets 52 percent of the time in 2007, which is up from 25 percent in 2006.⁶

Furthermore, 63 percent of the LPs anticipated that emerging market private equity funds would deliver **substantially** higher returns over the next five years.⁷ So many more Private Equity professionals are getting into the game and betting on emerging markets these days, with even more expected to do so in the near future. By 2012, 87 percent of LPs are expected to be investing in Russia compared with 61 percent today. By that time, 64 percent of LPs are expected to invest in Latin America compared with 31 percent today.

Russia

Economic Overview

Since 1999, Russia has experienced outstanding growth rates, constantly improving macroeconomic conditions, and a growing involvement in the global economy. These achievements, together with high world oil prices, political and economic stability, and skyrocketing foreign direct investment have all contributed to the growth of the country's economy.

Russia is the fastest growing economy in the G8 group of industrialized nations. Over the last seven years, Russia's economy has grown by an average rate of 6.8

4 Ibid.

5 Ibid.

6 “EMPEA Quartely Review Q2 2007,” EMPEA. June 2007.

7 “EMPEA Quartely Review Q2 2007,” EMPEA. June 2007.

percent each year and is projected to grow at an average rate of 6 to 7 percent YOY through 2010. In 2006 and 2007 Russia's growth exceeded all expectations, accelerating in several key economic sectors such as real estate, tourism, and retail.

Russia has a very stable macroeconomic situation. Inflation runs below 10 percent and foreign currency and gold reserves have increased to around \$400 billion, making Russia the world's third largest after China and Japan.⁸ The strength and stability of the economy has also been noted by the major credit rating agencies (S&P, Moody's and Fitch), all of which awarded Russia an upgraded investment rating in 2006.⁹

Technology in Russia

Russia has a long history of significant scientific and technological accomplishments. During the Soviet era, it was the only competitor to the United States in most technological fields. More recently, many multinationals (Intel, Hewlett-Packard, and Motorola, just to name a few) have established significant R&D operations in Russia to leverage its immense technological expertise.

Hardware production is the major IT segment and accounts for 80 percent of the whole Russian IT market.¹⁰ There has been strong growth (50 percent) in laptops and portable PCs. Russian macroeconomic growth has spurred infrastructure improvement, which in turn helped to fuel growth in the Russian telecom sector. Revenues in Russian telecom reached \$29.6 billion in 2006, a 26 percent growth over 2005.¹¹ In 2006, the Russian Information Technologies and Communications market exceeded \$40 billion.¹² Aerospace and medical markets have also displayed substantial growth during the last decade.

Investment Climate in Russia

The excellent macroeconomic conditions make Russia a thriving capital market that foreign investors are increasingly finding more attractive. Foreign investment for the *first half* of 2007 totaled \$67 billion,¹³ compared, for instance, to \$14 billion in Poland in the *entire* 2006.¹⁴ Economists say that, "unlike in China, there are no signs of overheating of the economy detectible. Modern Russia has never before seen such a growth rate and economists expect the tendency to continue."¹⁵

8 RIA Novosti, May 21, 2007. Available online at: <http://www.cdi.org/russia/johnson/2007-115-4.cfm>

9 Russian IT quarterly. Available on-line at: http://www.reksoft.com/misc/reksoft_co/files/137/Russian_Economy_Outlook.pdf

10 "Trends in the Russian IT Market," Starboard LLC Accessed: October 18, 2007. Available online at:

<http://strategis.ic.gc.ca/epic/site/imr-ri.nsf/en/gr118437e.html>

11 United States Commercial Service. Accessed: October 18, 2007. Available online at:

www.bisnis.doc.gov/bisnis/bulletin/mar07.htm#3

12 Ibid.

13 Kommersant July 23, 2007. The Russian Investment Boom Continues

14 Polish information and Foreign investment Agency. Available on-line at:

http://www.paiz.gov.pl/nowosci/?id_news=1350&lang_id=1

15 Kommersant July 23, 2007. The Russian Investment Boom Continues

Russia is open to foreign investment and President Putin has repeatedly stated that foreign investment is critical to the economic development of Russia. Russia's vigorous GDP growth and rising incomes have attracted increasing interest from foreign investors.

Many regions have developed laws and programs to attract foreign direct investment. The 1991 investment code guarantees foreign investors rights equal to those of Russian investors. This code also prohibits the nationalization of foreign investments in Russia. Russia has adopted a new land code in 2001 which allows for foreign ownership of Russian land. Russia also implemented a series of amendments to its laws on currency controls in 2004, which allow companies investing in Russia to freely exchange their money into foreign currencies.¹⁶

Brazil

Economic Overview

Characterized by large and well-developed agricultural, mining, manufacturing, and service sectors, Brazil's economy outweighs that of all other South American countries and is expanding its presence in world markets. Brazil has a population of 190 million, which makes it the 6th most populous country in the world and by far the most populous in Latin America.¹⁷ What's particularly fascinating about Brazil's demographics is that 39 percent of its population is under the age of 20.¹⁸ According to the World Bank, Brazil will be one of the five fastest developing countries in the world in the next 25 years. Amongst developing countries it has the largest number of companies adhering to the ISO 9000 standard, containing ten times the amount of such companies in Argentina and Mexico combined.¹⁹ This obviously demonstrates the willingness and dedication of Brazil towards quality-driven market growth into the future.

The economy achieved steady growth in 2004-2005, accelerating in 2006 and 2007. At the same time, inflation rates are around 4 percent a year, the balance of payments is registering record surpluses, Brazil has accumulated large foreign exchange reserves, and there has been a great drop in public debt vulnerability. The Brazilian Real, the local currency, has been the best performing currency in the world over the past three years. It has rallied more than 60 percent during this time period and growth is expected to continue.²⁰ All of these factors make Brazil a phenomenal target for premium Western private equity investors.

16 "2006 Investment Climate Statement - Russia," U.S. Department of State. Accessed: October 17, 2007. Available online at:

<http://www.state.gov/e/eeb/ifa/2006/62376.htm>

17 CIA - The World Factbook - Brazil. Available online at:

<https://www.cia.gov/library/publications/the-world-factbook/index.html>

18 "Brazilian Quarterly Report," Strategy Research Corporation, 2000.

19 "International Market Research - Cosmetics Industry," The Department of Commerce. February 20, 2004. Available online at:

<http://strategis.ic.gc.ca/epic/site/imr-ri.nsf/en/gr123285e.html>

20 "Strong Currency Bolsters Luxury Sales in Brazil," International Herald. June 26, 2007. Available online at:

<http://www.ihf.com/articles/2007/06/25/bloomberg/bxatm.php>

Technology in Brazil

Brazil is experiencing growth across all of its technology segments. Brazilians have access to great education in the technology sector and this educational system is helping drive industry growth. Information Technology Hardware is one of Brazil's fastest growing sectors. In 2005, total revenue for hardware reached \$37 billion, which represents a 12 percent increase over 2004.²¹ IDC Brazil predicted 9 percent growth in hardware throughout 2006 and 2007.²² As the Brazilian economy continues to perform well, consumer purchasing power and demand for technology will expand in all segments. For example, Brazil is Latin America's largest telecom market, representing 35 percent of the region's revenues. Telecom should continue to see strong investment due to the recent addition of two more transmission lines and growing demand for electronic components. Brazil's strong technology growth is clearly evidenced by its cutting edge aircraft industry (importing 20 percent more aircraft and parts in 2005 than in 2004) and medical equipment market (which topped \$2 billion in 2006, an increase of 80 percent since 1999).

Investment Climate in Brazil

Brazil is one of the world's leading investment destinations. A number of constitutional reforms and laws that have been recently passed have significantly improved its overall investment climate. In 2005, foreign investment in Brazil was \$42 billion and United States companies were the lead investors with \$14 billion.²³ In recent years, Brazil has reduced its trade barriers. Brazil's average Normal Trade Relations (NTR) tariff is currently only 10.7 percent, which is down from 32 percent in 1990. Foreign owners may own land in Brazil.²⁴ There are also very few restrictions on converting or transferring funds associated with an investment in Brazil. Overall, the investment climate is conducive to cross-border PE transactions.

Conclusion

The emerging markets of Latin America and the former Soviet Union present enormous opportunities for GSI Group, Inc. These markets have potential for extraordinary growth not achievable in the already established countries of Western Europe and North America.

The research performed by ACG on Russia and Brazil is provided merely as a starting point for considerations of market entry into these regions. Once established in these markets, entry into other similar regional markets will become significantly more efficient.

21 "Brazil Country Commercial Guide," U.S. Department of Commerce. January 2006. Available online at: www.buyusa.gov/brazil

22 Ibid.

23 Ibid.

24 Ibid.