Market Analysis Report: China’s Enterprise Software Industry

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EXECUTIVE SUMMARY

Market Overview:
Overall software market - China’s software market has expanded quickly over the past few years, with particularly strong growth in Beijing, Dalian, Guangdong and Jiangsu provinces.

Enterprise software market – China is expected to be the world’s fastest growing enterprise software market over the next three years. Enterprise resource planning (ERP), accounting, and supply chain management (SCM) software are the biggest market sectors.

Market structure:
- Domestic companies have been able to control the market through government support, deep understanding of local needs and business practices, localized services, and more competitive pricing.
- However, foreign companies have had success selling to Chinese multinationals in the high-end market segment due to their more advanced technologies.

Market challenges:
- Enterprise software companies are faced with many challenges associated with an immature commercial environment, including limited understanding of enterprise software and its benefits, as well as piracy issues.
- Foreign companies are also faced with discrimination in China’s government procurement, which makes up a significant part of the market.

Emerging industry trends:
- Government initiatives such as domestic industry consolidation and the “going abroad” strategy will encourage domestic companies to increase investment in enterprise software over the coming years.
- Use of software as a service (SaaS) technologies and applications will increase due to their low cost benefits and China’s piracy issues.

Regulatory Overview
Government stakeholders - Oversight of China’s software industry involves numerous stakeholders with overlapping authority, including the Ministry of Industry and Information Technology (MIIT), National Development and Reform Commission (NDRC), and General Administration of Press and Publication (GAPP).

Regulations and Standards – China’s software industry is mainly governed by Regulation on Administrative Measures of Software Products, Administrative Provisions on Electronic Publishing, and National Software Engineering Standards.

Foreign Investment in Software - Software is classified as an “encouraged” industry for foreign investment which can enjoy preferential policies such as tax incentives.

Development and Incentive Policies – China has issued a number of development plans and policies that promote its national strategy of “indigenous innovation”, which aims to
reduce China’s dependence on foreign technology by developing domestic proprietary IPR.

- Document 18 – as the most important government software policy document, which provides preferential measures for software enterprises, and is currently being updated.
- 12th Five-Year Plan – this is the blueprint for China’s development from 2011-2015, and is expected to heavily promote high-end software as part of the next generation information technology “strategic emerging industry”.
- Medium and Long-term S&T Development Plan – a plan to promote China’s indigenous innovation, largely through considerable R&D expenditures.
- Indigenous Innovation Catalogue – a catalogue of products that will receive preference for government procurement; software is one of six highlighted sectors.
- Software parks – a key mechanism for government support of the software industry; companies in these parks receive financial and policy benefits.

National Science and Technology (S&T) Programs – These programs receive extensive government funding. Foreign participation is limited unless companies are willing to engage in technology transfer.

Market Opportunities

ERP software in banking and telecom – Chinese banking and telecom conglomerates will have high demand for ERP software in the coming years as they expand domestically and abroad.

Mobile ERP – Expansion of China’s network infrastructure will enable greater use of mobile ERP.

SCM software – The growing number of Chinese multinationals will require SCM software to manage global supply chains.

Enterprise private clouds - Large companies in China are looking to enhance their management information systems through construction of private clouds.

SaaS applications – Enterprise software companies will be able to reach a larger audience - particularly SMEs, through SaaS technology and applications.

China’s S&T programs – Israeli software companies with technologies that contribute to wider government planning priorities may be able to access extensive government funding provided to China’s S&T programs.
1. MARKET OVERVIEW

1.1 GENERAL OVERVIEW OF CHINA’S SOFTWARE INDUSTRY

In the post-financial crisis period, China’s economy has maintained strong growth, with the gross domestic product (GDP) expanding 11.1% in the first half of 2010. This growth has been accompanied by a solid increase in domestic demand in both the overall Chinese economy and China’s software market. According to official data published by the Ministry of Industry and Information Technology (MIIT), China’s software market was valued at RMB 951.3 billion (USD 142 billion)\(^1\) in 2009.

Market Structure
Global software companies first entered the China market in the late 1980s. By leveraging their strong technologies and extensive capital, they grabbed considerable market share through partnerships with local service providers, distributors, and value-added resellers (VARs).

However, their market share was soon diluted as Chinese software companies quickly took control of the market through strong government support, a strong understanding of local software demands, and localized products and services. Chinese software companies are also able to provide multi-tiered, 24/7 support through huge teams of customer support personnel that work around the clock.

China’s overall software market is heavily dominated by domestic companies. While global software companies currently have an edge in the more high-end software sectors, domestic companies are now catching up due to an accumulation of experience, increasingly skilled talent, and government support.

Regional Software Markets
Beijing has traditionally been the center of China’s software industry - although Guangdong province, Jiangsu province and Dalian city have emerged as growth hubs.

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\(^{1}\) US/China exchange rate is 1 USD = 6.64 RMB as of November 22, 2010.
Beijing
Although Guangdong’s software industry is now larger than Beijing’s, and industry growth in Jiangsu and Dalian has also started to outpace Beijing, China’s capital city is still widely recognized as the center of the country’s software industry. Out of China’s top 100 software companies ranked by revenue, 22 companies are headquartered in Beijing. The city is also home to 50 “national-level key software companies” which the Chinese government hopes to develop into national champions. Beijing’s software industry maintained an average annual growth rate of 28% over the past decade, and even grew 17.4% year-on-year (yoy) to RMB 188.2 billion [USD 28.3 billion] during the middle of the global economic slowdown in 2009. According to the city’s development plans, Beijing aims to achieve RMB 400 billion [USD 60 billion] in revenue from software and information technology services by 2012.

Beijing’s software industry has been successful largely as a result of two factors: an enormous talent pool and extensive government support. Beijing is home to a number of China’s top universities, including Peking, Tsinghua, and Renmin, which provide a significant source of talent for software companies in the city. Furthermore, as one of China’s major metropolitan areas, Beijing is also able to attract talent from less-developed Chinese cities.

Government support for Beijing’s software industry is mainly provided through the establishment of special information technology (IT) districts, which promote the development of complete industry chains for software and information services. The government devotes extensive resources to developing infrastructure in these districts, and offers companies financial and policy incentives to establish operations there. The government is especially invested in the Zhongguancun Software Science Park, which it hopes to develop into “Asia’s Silicon Valley”. Zhongguancun - designated by the government as a “national-level indigenous innovation demonstration region” in order to promote domestic technology development - has thrived due to government incentives, and accounts for 82% of the total revenue from Beijing’s software industry.

Guangdong Province
Guangdong’s software industry is now China’s largest, with RMB 197.8 billion [USD 30 billion] in revenue in 2009, accounting for just over 20% of China’s total software revenue. 98.6% of the province’s software industry revenue comes from the Pearl River Delta Region, namely the cities of Shenzhen, Guangzhou and Zhuhai.

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2 China Electric Information Industry Statistics Yearbook, 2009
Guangdong’s software industry developed around the province’s manufacturing sector, which has long had industry clusters in manufacturing of related hardware such as telecom equipment and semiconductors.

Guangdong is especially strong in embedded software, a sector which generated RMB 55.6 billion [USD 8.3 billion] in revenue in 2009, accounting for 28% of provincial software sales. In addition, Guangdong’s software technology services and system integration sectors have experienced significant growth in recent years, with combined revenue composing 21% of provincial software sales in 2009, up 10% yoy.

Guangdong has also taken a leading position in China’s software exports, earning RMB 69.9 billion [USD 10.5 billion] from software exports in 2009, accounting for 54% of China’s total. Specifically, exports from embedded software earned RMB 48.5 billion [USD 7.3 billion], which accounted for 70% of national export sales in this sector.

**Jiangsu Province**

Jiangsu province is also emerging as a major software center in China. In 2009, revenue from its software industry grew 27.2% to RMB 160.6 billion [USD 24 billion], comprising 16% of China’s total software industry revenue. Jiangsu’s software companies are now developing both in terms of size and maturity. In 2009, 227 Jiangsu companies earned revenues exceeding RMB 100 million [USD 15 million], up 62.14% yoy. Also, 245 companies passed CMMI2 (Capability Maturity Model Integration Level 2), up 138% yoy.

Similar to Guangdong, Jiangsu’s software industry also developed around an existing hardware manufacturing industry. In recent years, the Chinese government has sought to promote Jiangsu province, particularly the provincial capital Nanjing, as a center for software development. MIIT designated Nanjing as China’s first “Software City” in

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4 CMMI is a process improvement approach for software engineering that helps organizations improve their performance. There are five levels total, with level 5 being the most mature. Level 2 indicates that the software engineering approach is characterized for projects and is often reactive, whereas Level 3 indicates that the approach has been standardized.
October of this year, and the city aims to achieve RMB 100 billion [USD 15 billion] in software sales in 2010.

Jiangsu’s software industry also has a strong focus on embedded software and system integration - though it has recently started to see an adjustment in industry structure. In 2009, the province’s revenue from embedded software accounted for 34.5% of total provincial software revenue, down 46%, while revenue from software products, system integration and software outsourcing saw high-speed growth.

**Dalian City**

The port city of Dalian in Liaoning province is the center of northeast China’s software market. Dalian’s software industry is focused primarily on providing software outsourcing services for multinational companies, and the city ranks first in China and fifth globally for offshore software delivery. In 2009, revenue from Dalian’s software industry was RMB 60.3 billion [USD 9 billion], up 36.8% yoy.

Dalian’s software industry initially developed largely as a result of its physical proximity to Japan and Korea - which began using the city as an IT outsourcing center in the late 1990s. Over 40 multi-nationals, including IBM, HP, Dell, Accenture, SAP and Sony have now established software development centers in Dalian, and 53 of the Fortune Global 500 have established information service centers in the city, covering industries including finance, insurance, telecommunications, and manufacturing.

### 1.2 Enterprise Software Market

China’s enterprise software market reached RMB 20.3 billion [USD 3 billion] in value in 2009, and according to IT research and the advisory firm Gartner, China is expected to be the world’s fastest growing enterprise software market over the next three years, with an estimated compounded annual growth rate (CAGR) of 14.6% from 2008 to 2013. The increasing globalization of China’s economy has led to a growing need for advanced software with up-to-date features and improved functionality.

#### A. Market Structure

As with China’s overall software industry, the enterprise software market is dominated by domestic companies, which have been able to control the market (with 77.5% market share in 2009) through government support, deep understanding of local software needs and business practices, and localized products and services including round-the-clock customer support.

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5 International Data Corporation’s (IDC) 2009 global delivery index.
7 China Computerworld
Foreign software companies have had much more success at the high-end of the market than at the middle and low-end, a common phenomenon in China’s high-tech industries:

- **High-end market** – Foreign companies controlled 50.8% of the market in 2009 as Chinese companies have just started developing many sophisticated technologies long held by foreign companies.
- **Middle-end market** – Chinese companies dominate this market segment with 83.9% market share in 2009, as foreign companies have been unable to provide the large numbers of support staff offered by their Chinese counterparts.
- **Low-end market** – Chinese companies dominate the low-end market with over 90% market share due to their ability to compete effectively on prices.

Most foreign software companies generate business from multinationals operating in China, which represent a relatively small segment of enterprise software customers. Due to the reasons mentioned above, few foreign companies have succeeded in securing contracts from state-owned enterprises (SOEs) and private Chinese companies, which make up the largest customer bases in China’s enterprise software market. In many cases, foreign software providers must forge partnerships with local vendors in the forms of technology cooperation or joint ventures (JVs) in order to gain access to the market.

Domestic companies have been especially successful at targeting Chinese customers, particularly small and medium-sized enterprises (SMEs), through their advantages of localized knowledge, products and services. In contrast, large foreign companies have struggled to meet the needs of these smaller customers. Also, local software companies tend to offer more basic products at low prices, which better suits this market segment.

The major players in China’s enterprise software market are listed below:

<table>
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<tr>
<th>Major Players in China’s Enterprise Software Market (2009)</th>
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<tbody>
<tr>
<td><strong>Chinese Software Companies</strong></td>
</tr>
<tr>
<td>UFIDA – Leader in China’s software market with special expertise selling to SMEs.</td>
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<tr>
<td>Inspur – China’s leading supplier of computing platforms and IT application solutions; Also China’s largest server manufacturer and server solutions provider</td>
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<tr>
<td>Kingdee – Leading Chinese ERP software vendor with strong SaaS capabilities, making it well-positioned to take advantage of future growth opportunities in the country</td>
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<tr>
<td>Neusoft – Leading Chinese IT solutions and service provider with global operations; serves a diverse set of large corporate customers worldwide through its product engineering solutions &amp; services</td>
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<tr>
<td>Chinasoft International – Comprehensive software and IT service company, with strong ERP expertise in the tobacco, banking and telecommunications industries</td>
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<tr>
<td><strong>Global Software Companies</strong></td>
</tr>
<tr>
<td>SAP – Global software giant positioned at the high end of the Chinese market; has had great success selling to large Chinese banks and technology firms such as Huawei and Lenovo</td>
</tr>
<tr>
<td>Oracle – Currently trying to leverage its software and hardware strengths (following its Sun acquisition) to offer integrated products and solutions that build on its already-sizeable presence in China.</td>
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B. Market Sectors
China’s enterprise software sector is dominated by enterprise resource planning (ERP), accounting, and supply chain management (SCM) software, which together accounted for 79.2% of the market by revenue in 2009.

Enterprise Resource Planning (ERP) Software
ERP is by far the largest sector in China’s enterprise software industry, accounting for 50.5% of the market in 2009.

The largest growing customer bases for ERP software in China are the Chinese government and large state-owned enterprises (SOEs). Government ministries, agencies, and affiliated institutes at all levels have begun procuring ERP software to improve productivity and develop e-government systems, and SOEs have started adopting the software to accommodate their aggressive expansion and restructuring. Adoption of ERP software is especially attractive to large conglomerate SOEs in industries such as banking and telecommunications, largely due to the need for management software that can support their frequent merger & acquisition (M&A) activities.

While domestic companies dominate the ERP software market, large foreign companies such as SAP have had some success by targeting the high-end market, where their global expertise and experience have helped them compete successfully against local software companies.

Accounting Software
Accounting software comprised 16.8% of the enterprise software market in 2009, making it the second-largest sector. Originally created to service China’s tax agencies in the 1990s, the domestic accounting software sector has grown into a diversified and competitive sector, serving a wide array of government and private institutions.

Accounting software in China must conform to unique Chinese financial practices, including Chinese regulations governing taxation and accounting, and the use of Chinese language. Most accounting software products developed outside the China market are therefore not recognized by Chinese government agencies -thereby greatly limited foreign participation in this particular market segment.

Supply Chain Management (SCM) Software
SCM software, including demand management, sales and operations planning, and logistics management ranks third in the enterprise software market at 11.9%. Globalization has increased demand for SCM software to better integrate processes and more efficiently and effectively manage purchase and supply functions in China. As the
majority of this demand is currently generated from multinationals, foreign software companies are able to play a significant role in this market segment.

C. Market Challenges
Despite strong growth potential in China’s enterprise software market, software companies are faced with many challenges associated with operating in an immature commercial environment. With the exception of multinationals, a relatively small percentage of companies in China are interested in adopting enterprise software systems due to inadequate understanding among domestic companies of the benefits provided by enterprise software and rampant software piracy. Foreign companies are also faced with challenges such as China’s government procurement policy.

Limited Understanding of Enterprise Software
It is widely acknowledged that few domestic users can fully appreciate the value of enterprise software to their operations. The enterprises that do purchase software products or services tend to be unsophisticated customers, unsure of their needs and thus unable to provide the feedback that might help domestic producers develop innovative products. This suggests an urgent need for software vendors to provide users with easier access to pre-sales learning resources, as well as post-sales services.

Piracy Issues
Rampant piracy has and will continue to hinder the software market’s development in the foreseeable future. Extremely high rates of piracy reflect and reinforce the immaturity of China’s enterprise software market by forcing software companies to compete by cutting prices rather than by improving quality or features. Software companies become unwilling to expend resources on product innovation when a company with an innovative product idea is more likely to have the idea stolen than become a market leader.

The Chinese central government, which appears to understand the importance of intellectual property rights (IPR) protections, has repeatedly announced plans to crack down on software piracy. Document 18, a key government policy document governing software industry development (more details provided in section 2.4 of this report), outlines harsh penalties for piracy, including fines of 5-10 times the value of the pirated software, prison sentences and equipment confiscation for manufacturers. Most
recently, in October 2010, China’s State Council launched a six-month national campaign to combat software piracy.

These efforts have contributed to a decrease in China’s software piracy rate from 90% in 2004 to 80% in 2008, according to the Business Software Alliance. Piracy issues remain a challenge for software companies due to difficulties with IPR enforcement, ineffective government coordination of IPR protection efforts, and lack of understanding in China on the wider benefits of IPR. In addition, the government may be unwilling to immediately eradicate China’s significant IPR piracy industry, which employs a significant number of people.

**Government Procurement Policy**

Another challenge for foreign software vendors operating in the Chinese market is China’s government procurement policy, which discriminates against foreign products. Chinese government procurement represents a huge market segment, with purchases from China’s central and local procurement totaling over RMB 7.6 trillion [USD 1.1 trillion] in 2009, according to the Ministry of Finance. The desire among government officials to create strong “national champions” (for both economic and security reasons) has led them to give strong preference in government procurement to domestic software companies. In many cases, seeing as domestic software firms cannot meet government needs due to insufficient technology capabilities, foreign software vendors have been able to circumvent this challenge and access the government procurement market by forging technology partnerships with Chinese companies.

**D. Emerging Industry Trends**

Despite these challenges, there is a positive outlook for foreign software companies interested in the Chinese software market, particularly as government initiatives promoting industry consolidation and “going abroad” will encourage domestic enterprises to increase their investments in enterprise software over the coming years. In addition, use of software as a service (SaaS) technologies will increase due to their low cost benefits and piracy challenges.

**Industry Consolidation**

In recent years, the Chinese government has embarked on an initiative to restructure its domestic industries by consolidating companies in fragmented industries into a few dominant firms through M&A activities. According to Mr. Li Rongrong, the former Chairman of the State-Owned Assets Supervision and Administration Commission
The total number of Chinese SOEs will be reduced from 123 to between 80-100 by the end of 2010. It is expected that the larger SOEs that emerge from this wave of industry consolidation will demand more sophisticated enterprise software and related technologies to manage their increasingly complicated and wide-ranging business operations.

**Going Abroad Strategy**

In 2002, the Chinese government initiated a “going abroad” policy encouraging Chinese companies to invest abroad and expand business operations globally. As Chinese companies expand their presence in overseas markets, their demand is expected to increase for many types of advanced enterprise software to manage these operations. Demand for ERP software will grow as companies begin to acquire resources outside China, and demand for SCM software will increase as Chinese multinationals will need to manage global demand, sales operations, and logistics.

**SaaS Technology**

As piracy continues to limit traditional software distribution in China, SaaS has the potential to be a breakthrough technology for the distribution of enterprise software in China, given that SaaS relies on network-based access and tends to be a lower-cost way for companies to use enterprise software.

China is already a significant regional player in SaaS technology. According to IDC, China is the second-largest spender in Asia-Pacific after Japan with RMB 589 million [USD 88.5 million] in 2009, accounting for 28% of total regional SaaS spending. Gartner predicts that the China SaaS market should grow rapidly at a CAGR of 28.9% from 2009-2014, reaching RMB 2.1 billion [USD 316 million] by 2014.

SaaS will remain a small part of the overall Chinese software market for some time due to its relative novelty, although it is likely to expand as potential customers learn more about the technology, software companies learn how to address security concerns, and the Chinese government pushes SaaS application development as a key focus. The government has included SaaS development in many upcoming key policy documents guiding development of China’s software industry including the updated Document 18 and China’s 12th Five-Year Plan (FYP) (see section 2.4 of this report).

**SaaS Applications**

Although SaaS technology is still developing in China, SaaS applications such as web conferencing and team collaboration activities are already huge markets. According to the IT market research company China Computerworld, the web conferencing market was RMB 4.4 billion [USD 662 million] in 2009, and will likely increase to RMB 5.29 billion [USD 796 million] in 2010, a 20% yoy increase. Team collaboration applications generated RMB 2.8 billion [USD 421 million] in 2009, a 48.7% yoy increase from 2008, and will likely grow even more in 2010.

These applications have enjoyed such immense popularity due to their low costs (no need for hardware or software investment, or maintenance fees), and the growing...
demand from Chinese companies for technologies that improve management efficiency and controls.

2. REGULATORY OVERVIEW

China’s software industry is not only a highly promoted but also a heavily regulated sector, managed by several government authorities at both the macro and micro levels, and governed by a series of government regulations, national standards, and policies and programs.

2.1 GOVERNMENT STAKEHOLDERS

Oversight of China’s software industry involves numerous stakeholders with overlapping authority. Highlighted below are the key industry regulatory bodies and their primary responsibilities.
2.2 Regulations and Standards

The major regulations and standards governing China’s software industry are below.

Regulation on Administrative Measures of Software Products (《软件产品管理办法》)
Regulation on Administrative Measures of Software Products, which was first issued by MIIT in 2000 and revised in 2009, is the main regulation governing China’s software products market. The Regulation specifies:

- All software products, both domestic and imported, must be registered in China through MIIT authorized agencies. The registration license expires and must be renewed every 5 years.
- The production of software products in China must comply with Chinese laws, relevant standards, and IPR measures.
- Software companies can sell software products directly or through qualified agencies. The test editions of software products must be marked clearly and provided free of charge, and cannot be sold for profit.
- Software products that are registered and comply with the Regulations may receive relevant policy incentives.
- MIIT, together with relevant government authorities and regional surrogates, supervise the development, production, sales and trade of software products in China.

Administrative Provisions on Electronic Publishing (《电子出版物出版管理规定》)
Software products distributed in physical form (i.e. through CDs) are considered electronic publications, and must therefore conform to the Administrative Provisions on Electronic Publishing. These Provisions, which took effect April 2008, specify:

- General Administration of Press and Publication (GAPP) is China’s administrative organ responsible for e-publication activities.
- E-publications may only be produced by qualified organizations licensed by GAPP, and any unauthorized entity that engages in publishing, copying, importing or distributing e-publications will be shut down.
- E-publications must be licensed with an international/national standard number and comply with national standards governing technology, quality etc.

National Software Engineering Standards
China adopts a series of national standards (detail in Appendix III), entitled GB, in line with international standards developed by the International Standards Organization (ISO) and industry standards developed by the Institute of Electrical and Electronics Engineers (IEEE). GB standards have been adopted nationwide since 1985 and are separated into three general categories: basic & management standards, development & maintenance standards, and measurement & evaluation standards. In terms of quality certification, China has integrated the ISO 9000 series into the Chinese GB/T 19000, which has allowed for greater ease in international trade activities.

The local software registration and testing agencies are authorized by MIIT and its surrogates, such as regional software industry associations, software parks testing centers, etc.
2.3 FOREIGN INVESTMENT IN SOFTWARE

China has welcomed foreign investment in its software industry in order to promote domestic technological innovation. China’s ascension into the WTO has also improved the country’s overall investment environment by bringing down tariffs, increasing transparency, promoting IPR protection, and increasing market openness, among other benefits.

Foreign Investment Guidance Catalogue
Foreign investment, while liberalized via WTO obligations, remains guided in part by the Catalogue for Guidance of Foreign Investment that categorizes business sectors into four groups: encouraged; permitted; restricted; and prohibited. According to the Catalogue - most recently updated in 2007, software products development and manufacturing, which is categorized both as a manufacturing and service industry, is classified as an encouraged group for foreign investment that can enjoy preferential policies. Foreign-invested enterprises (FIEs) in encouraged industries are often permitted to establish wholly foreign-owned enterprises (WFOEs), and are generally eligible for investment incentives including preferential tax treatment.

Impact of WTO
China’s entry into the WTO has had limited direct impact on its software industry as the sector had already become fairly liberalized with the exception of tariff protections and export subsidies. China’s WTO and Information Technology Agreement (ITA) commitments, stipulated that China would bring down tariffs on IT items, including software products, to zero by 2005. Since then, China has increased the transparency and predictability of its business environment for the software industry, witnessing significant growth of its import and export of software products, and greater market openness in terms of products and services. Based on the WTO agreement, foreign suppliers will be allowed to provide software support services and have more freedom in establishing service centers. Moreover, the legal system in China, particularly with regard to the protection of intellectual property rights, has improved as China has agreed to abide by the WTO’s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) to achieve better enforcement of IPR protection.

2.4 DEVELOPMENT AND INCENTIVE POLICIES

The Chinese government has issued a number of development plans and policies that promote its national strategy of “indigenous innovation”, which aims to achieve Chinese economic sustainability by reducing dependence on foreign technology.

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9 The Information Technology Agreement (ITA), an agreement enforced by the WTO, aims to expand world trade in information technology products and encourage continued technological development of the information technology industry on a worldwide basis. The objective of the Agreement is to bring down tariffs on IT items in stages to zero by a specified year. China joined the ITA on April 23, 2003, and was scheduled to lower all taxes and tariffs on information technology products by 2005.
**Document 18**
The most important central government policy for the software industry is the State Council Circular on Certain Policies for Encouraging the Development of Software and Integrated Circuit Industries issued in August 2000, which is often referred to as Document 18. The policies provide preferential measures for software export, support the use of original software, and give income tax concessions to software enterprises. These policies assume an internationally open and competitive market, but also require that preferential policies be applied only to companies that are certified as software enterprises based on standards set by MIIT and locally audited by the Chinese Software Industry Association.

The current Document 18 will expire at the end of 2010 and the Chinese government is currently working on a new Document 18. According to MIIT Minister Li Yizhong, the new document will expand preferential tax policies supporting industry development and include more active policies to encourage industry M&A and corporate restructuring. The details in the new Document 18 will be of critical interest to Israeli software enterprise companies, as it will help shape the sector for the next several years.

**12th Five-Year Plan (FYP)**
China’s 12th Five-Year Plan for Economic and Social Development, which lays out the country’s national priorities from 2011-2015, is currently being developed. Although it will not be formally approved and released until March 2011, MIIT has released a list of tasks and priorities that are likely to figure prominently in the plan, including the promotion of “informationalized” industries through adoption of enterprise software. The 12th FYP is also expected to heavily promote seven “strategic emerging industries”, which includes software - as described in greater detail below. This document will form the basis for sector-specific 12th FYPs that are still being developed by relevant ministries, and will provide more detailed guidance for the software industry. When these details are made public, they will also be a critical factor in shaping the enterprise software sector going forwards, and should be monitored by Israeli software companies.

**Strategic Emerging Industries**
In October 2010, the State Council issued the Circular on Accelerating Development of Strategic Emerging Industries, which identifies seven strategic emerging industries that will lead the nation's economic development, receive government funding, and enjoy financial and other policy incentives. These industries include new-generation information technology, which covers high-end software. Government officials have indicated that key directions for software-related development in the coming years include cloud computing, SaaS, software export and service outsourcing. Israeli software companies should track development relating to strategic emerging industries as more details emerge from China’s industrial planning machine – it will most likely play a major role in shaping the sector in the months and years ahead.

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10 The Authentication Standards measure an enterprise's scale (value of registered capital, annual income, and exports) and evaluate its products.
Medium- and Long-Term S&T Development Plan (2006-2020)

This plan, considered to be a blueprint for China’s science and technology (S&T) development until 2020, aims to strengthen indigenous innovation to reduce the country’s dependency on foreign technology. A main component of the plan is the rapid expansion of China’s national R&D expenditures – primarily through 16 “special projects”, which should “assimilate and absorb” advanced technologies imported from outside China so that it can develop high-tech products with proprietary IPR. The first and most developed special project is Core Electronic Components, High-End General Chips and Basic Software Products (CHB), - described in more detail in Section 2.5.

Indigenous Innovation Catalogue

The Chinese government has also sought to promote indigenous innovation through its significant government procurement market, which was valued by the Ministry of Finance at RMB 7.6 trillion [USD 1.1 trillion] in 2009. In November 2009, the government released a public draft of the Circular to Carry Out the Work on Accreditation of National Indigenous Innovation Products, known as Circular 618, which announced the creation of a new national-level catalogue of products that will receive preferences for government procurement. The document focused on six high-tech fields, including software, and indicates that only products with IP registered in China will be included in the catalogue.

After a robust response from China’s foreign business community and foreign governments, the Chinese government backtracked in April 2010 by softening the most controversial requirements; yet, uncertainties remain on the definition of “domestic” software products and the extent to which foreign products will be included in the catalogue in practice. If foreign enterprise software providers are excluded from accessing China’s government procurement market, this will impact their overall business prospects given its large proportion of China’s total software market.

Software Parks

The Chinese government has also intensified its direct support of the software industry by setting up software parks and industry bases to encourage investment and R&D in major Chinese cities. Not only does the government expend significant resources on infrastructure to support software companies that establish operations in these parks, but companies also often receive extensive financial and policy benefits such as tax incentives. Efforts to build infrastructure for software production have been focused on communication networks, R&D infrastructure, testing facilities, and shared databases, supplemented with facilities for training software engineers and technicians. There are currently around 70 software parks in China; major parks include the Beijing Software Industry Base, the Shanghai Pudong Software Park, and others in Guangzhou, Xi'an, Jinan, Changsha, Dalian, Chengdu, Zhuhai, Nanjing and Hangzhou.

2.5 National Science & Technology Programs

The Chinese government has also initiated a number of S&T programs designed to promote indigenous innovation in China’s software industry by providing extensive government R&D funding. Foreign participation in these programs is possible, but companies may need to consider transferring their technologies to Chinese partners.
CHB Special Project (Core Electronic Components, High-end General Chips and Basic Software Products)

The CHB program, one of the 16 special projects outlined in the Medium- and Long-term S&T Development Plan, includes basic software products such as operating systems, database management systems and middleware. Initiated in 2008, the CHB Program will continue to enjoy government support until 2020, with around RMB 4 billion [USD 601 million] in annual government funding.

Industrial Embedded Software Development Key Program

During the 12th Five-Year Period (2011-2015), the Program is expected to focus on development of embedded databases, mobile/intelligence terminal-enabled embedded software platforms, optical components-enabled embedded software systems, embedded real-time operation systems and embedded software development tools. As part of this Program, the government will provide heavy investment support for construction of relevant R&D platforms and data centers.
3. MARKET OPPORTUNITIES

3.1 CURRENT OPPORTUNITIES

ERP Software in Banking and Telecom
ERP software is currently the largest sector in China’s enterprise software industry, and will likely continue to expand rapidly over the next few years as large-scale Chinese companies demand more advanced ERP software to consolidate domestic industries and increase participation in the global market. Giant Chinese banking and telecom conglomerates will especially require ERP software to manage the resources from their multitude of local branches and increasing investments abroad. Foreign software companies have greater opportunity in the high-end market segment, where they have more sophisticated technologies and greater expertise than their Chinese counterparts.

Banking
Software spending in China’s banking sector will expand over the next few years mainly due the following reasons:
- Several major Chinese banks are now public companies and face greater demands for transparency and internal controls both at home and abroad.
- The Chinese Banking Regulatory Commission is in the process of modernizing the regulatory framework of China’s banking system.
- The 11th Five Year Plan (FYP) (2006-2010) and upcoming 12th FYP (2011-2015) emphasize the need for China’s banking industry to increase IT spending.

Telecom
Telecom companies will also increase ERP software spending as their operations become more complex and wide-reaching. In the past few years, China has invested heavily in the expansion of its 3G telecom network, and as this network grows, telecom companies will have greater demand for ERP software to manage operations.

Mobile ERP
The ongoing expansion of China’s 3G telecom network and the government’s initiative to develop homegrown 4G standards also creates the space for increased use of mobile ERP. Software companies can take advantage of China’s higher-speed connectivity and expanded network infrastructure to adapt existing software for use on mobile terminals or develop new ERP solutions for mobile devices.

SCM Software
SCM software will be a growing area for foreign software companies as more and more Chinese companies look to participate in overseas markets and develop global supply chains. Foreign software companies are well-placed to thrive in this sector as they have greater experience than their domestic counterparts in supplying customers with global operations, and can leverage their existing expertise and experience to access the growing number of Chinese multinationals.
Enterprise Private Clouds
Large companies in China are increasingly looking to enhance their management information systems through the construction of enterprise private clouds. As cloud computing technology matures and user acceptance increases, enterprise private clouds will be a key development trend for large companies in the next few years.

SaaS Applications
China will likely see significant growth in SaaS technology use due to anti-piracy issues associated with traditional methods of software distribution and favorable government policies promoting SaaS application development. Through SaaS applications, enterprise software companies will be able to reach a larger audience, particularly SMEs, which generally have limited budget for IT expenditures, but great demand for technologies that improve management efficiency and controls. Specifically, software companies will find great demand in the growing market for web conferencing and team collaboration applications.

China’s S&T Programs
Israeli enterprise software companies should expend resources to understand the rank of S&T, R&D and indigenous innovation-related policies and incentive programs. Foreign players are, in many instances, permitted to access this funding (often in partnership with domestic companies), and significant opportunities in the enterprise software sector will exist for companies that possess niche technologies that contribute to wider government planning priorities.

### 3.2 MAJOR SOFTWARE SCIENCE PARKS

<table>
<thead>
<tr>
<th>Major Software Science Parks</th>
<th>Number of Companies</th>
<th>Software Revenue in 2009 (USD mln.)¹¹</th>
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<tbody>
<tr>
<td>Beijing Zhongguancun Software Science Park</td>
<td>18</td>
<td>317.4</td>
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<tr>
<td>Dalian Software Science Park</td>
<td>387</td>
<td>4342.3</td>
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<tr>
<td>Shanghai Pudong Software Science Park</td>
<td>163</td>
<td>1841.9</td>
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<td>Nanjing Software Science Park</td>
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<td>2923.7</td>
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<td>Hangzhou Software Science Park</td>
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<td>6398.0</td>
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<tr>
<td>Shandong Qilu Software Science Park</td>
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<td>Changsha Software Science Park</td>
<td>248</td>
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<td>Guangzhou Tianhe Software Science Park</td>
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<td>Zuhai Nanfang Software Science Park</td>
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<td>Chengdu Software Science Park</td>
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<td>Xi’an Software Science Park</td>
<td>492</td>
<td>2714.2</td>
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### 3.3 KEY INDUSTRY EVENTS
Participation in key industry events may provide Israeli software companies with an opportunity to engage with key c-suite level decision-makers from China’s business community.

¹¹ China Electric Information Industry Statistics Yearbook, 2009
P&T / Expo Comm China  
**Location:** Beijing  
**Date:** Sept 26 - 30, 2011  
P&T/EXPO COMM China is the largest international ICT event held in Asia. Over 500 exhibitors from 13 countries participated in P&T/EXPO COMM China 2010 with 45,000 square meters of exhibition space. Over 300 media outlets provided thorough, complete and comprehensive coverage of this ICT event. The Expo provides opportunities to meet C-suite level decision-makers from telecom, satellite and Internet service providers, meet thousands of buyers from government and China's expanding enterprise community, and provide panel speaker opportunities.


China International Software & Information Service Fair (CISIS)  
**Location:** Dalian, Liaoning  
**Date:** June 16-19, 2011  
The CISIS is the only state-level fair approved by the State Council and is the most important event for China's IT industry. It is an international IT industry event and a platform for international cooperation. Each year, VIPs from overseas government departments, CEOs from the world’s top 500 companies, well-known consultants, and overseas IT associations take part in the fair with 30,000 square meters of exhibition space. The CISIS has played an important role in the domestic software industry. Around 30 exhibition delegations and 50 visiting delegations led by senior government officials take part in the fair each year.

APPENDIX

APPENDIX I: INVESTMENT ROADMAP

The following shows the general process by which a foreign firm would apply to establish a value-added service (VAS) JV in China’s communication industry. General approval for a VAS JV has four stages:

- Approval to establish a VAS JV from MIIT.
- Approval to establish a foreign invested telecom VAS JV by Ministry of Commerce.
- Sectoral service approval from MIIT.
- Business license approval from the State Administration of Industry and Commerce (SAIC).

Flow chart of VAS JV Application Procedure
APPENDIX II: MAJOR SOFTWARE SCIENCE PARKS IN CHINA

Software Science Park
# APPENDIX III: NATIONAL SOFTWARE ENGINEERING STANDARDS

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<th>Basic &amp; Management</th>
<th>Development &amp; Maintenance</th>
<th>Measurement &amp; Evaluation</th>
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