

June 2018



market monitor

Focus on ICT performance and outlook



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On the following pages we indicate the general outlook for each sector featured using these symbols:



Excellent

The credit risk situation in the sector is strong / business performance in the sector is strong compared to its long-term trend



Poor

The credit risk in the sector is relatively high / business performance in the sector is below its long-term trend



Good

The credit risk situation in the sector is benign / business performance in the sector is above its long-term trend



Bleak

The credit risk in the sector is poor / business performance in the sector is weak compared to its long-term trend



Fair

The credit risk situation in the sector is average / business performance in the sector is stable

Major shifts in the sector landscape

The global ICT market continues to expand, with sales of information technology and telecommunications products and services expected to increase by more than 3% per annum in 2018 and 2019. Business software and IT services are forecast to exhibit strong growth, while communications services continues to drive the majority of spending.

Uncertainty looms on the horizon due to the potentially negative impact of Brexit, interest rate increases, currency fluctuations and international trade disputes. However, despite these, businesses will continue to invest in ICT as they anticipate revenue growth, but their spending patterns are expected to shift. Projects in digital business, blockchain, Internet of Things, and progression from Big Data to algorithms to machine learning to Artificial Intelligence will continue to be main drivers of growth.

Advancing technologies and changing market conditions are driving major shifts in the ICT sector landscape. ICT companies face increasing pressure to improve time to market and to ensure their offerings are best in class and include evolving technologies – in a market environment generally characterised by high competition and pressure on margins.

This will increase the probability of failure for ICT businesses that are not able to adapt accordingly. The choice many ICT businesses face in order to survive is either getting big or going niche. Therefore many ICT businesses will partner up by pooling their resources for mutual gain – in areas where they do not compete directly. Another strategy for ICT companies in 2018 and 2019 will be mergers, acquisitions and divesture, which can provide a fast track to fending off competitors from both inside and outside one's industry. However, highly leveraged ICT companies could face challenges in financing mergers and acquisitions or other strategic investments.

China

- US punitive tariffs could have a substantial short-term impact
- Domestic sales growth is decreasing
- Payment delays are expected to increase in 2018



Overview					
Credit risk assessment	significantly improving	improving	stable	deteriorating	significantly deteriorating
Trend in non-payments over the last 6 months			~		
Development of non-payments over the coming 6 months				~	
Trend in insolvencies over the last 6 months			~		
Development of insolvencies over the coming 6 months			✓		
Financing conditions	very high	high	average	low	very low
Dependence on bank finance				~	
Overall indebtedness of the sector			~		
Willingness of banks to provide credit to this sector				~	
Business conditions	significantly improving	improving	stable	deteriorating	significantly deteriorating
Profit margins: general trend over the last 12 months			~		
General demand situation (sales)				~	
					Source: Atradiu

In 2017 Chinese ICT sector production growth outperformed GDP expansion again thanks to technological innovations such as cloud computing, Big Data, Internet of Things, Artificial Intelligence and advanced manufacturing. According to the Ministry of Industry and Information Technology (MIIT), total output of the sector exceeded CNY 18 trillion in 2017 (2016: CNY 16.96 trillion). While the ICT output growth rate was high with 9.1%, it was nevertheless lower than in 2015 (up 10.4%) and in 2016 (up 10.0%).

Despite the still high growth rate, the sector faced a challenging economic environment in 2017, which is expected to continue in 2018. Domestic personal computer demand shrank due to higher prices caused by a global component shortage that started in late 2016. Demand for consumer desktops also decreased, while the higher rate of market penetration and lack of major updates/new products has negatively impacted smartphone demand.

For ICT manufacturers competition is getting fiercer and major challenges are increasing. Oversupply in some subsectors like panels, printed circuit boards and lithium batteries has triggered price wars. At the same time, surging labour costs weaken China's cost advantage, especially against competitors in Southeast Asia.

In April 2018 the US government imposed a ban for US companies to sell components to the Chinese mobile phone and telecommunications equipment producer ZTE (Washington accused ZTE to have violated US sanctions by illegally shipping American technology to Iran and North Korea) US companies provide a major share of the components used in ZTE's equipment, and as a consequence ZTE has suspended operations for the time being. Additionally, the US administration has considered to impose 25% punitive tariffs on Chinese telecom items and smartphone

China: ICT 2017 2018f 2019f GDP growth (%) 6.9 6.4 6.0 Sector value added growth (%) 15.1 6.6 6.1 Average sector growth over the past 3 years (%) 8.1 Average sector growth over the past 5 years (%) 5.2 Degree of export orientation medium Degree of competition high Sources: Macrobond, Oxford Economics, Atradius

components, including displays and circuit boards, which would severely affect revenue growth of telecoms equipment makers. That said, end of May US president Trump announced that his government would lift the ban on ZTE if the company accepts certain stipulations, while talks to resolve general trade issues between the US and China are underway.

While any imposition of US import tariffs could lead to a slow-down of China's ICT industry in the short-term, the long-term impact should be mitigated by the fact that Chinese ICT manufacturers increasingly focus on emerging technologies such as Artificial Intelligence (AI), 5G, and the Internet of Things for revenue growth, at the expense of traditional telecoms equipment to drive revenue.

Chinese ICT sector The 13th Five Year Plan (2016-2020) advanced ICT products Huge domestic market that is expanding as the country develops further Growing number of intellectual property rights and patents across the IT value chain Erosion of China's cost advantages in some areas, with significant production volumes relocating elsewhere Pool of first-time buyers diminishing High levels of piracy, cyber security issues, fierce competition and regulatory uncertainty Source: Atradius ICT distributors and retailers also face major challenges and risks. Most smaller players in this segment are ICT distributors with one or two brands only, and as the ICT market is a fast changing one, such companies are exposed to elevated risks due to highly concentrated product portfolios. Another risk is higher moral hazard during a market downturn, as some players may bet on one-off deals to make big money and disappear from the sector afterwards. Transparency issues remain one of the main challenges in the Chinese ICT sector, as ownership of businesses and group structure are not always evident and there are often different sets of financials. Cross guarantees are widely used in bank lending to ICT traders, meaning that one company's liquidity collapse could drag down others.

On average, payments in the ICT industry take between 30 and 60 days. Due to the more difficult market conditions payment delays are expected to increase in 2018. However, a major increase in insolvencies is not expected for the time being. Our underwriting stance remains generally open, but we closely monitor the developments of the trade dispute with US and the US ban on ZTE and potentially on other companies. We especially scrutinise small-sized ICT distributors, system integrators and online retailers, as in those segments competition is fierce and the financial situation of businesses is often weaker.

Performance forecast along subsectors Telecom. IT production & production & ICT wholesale & retail







Germany

- Fierce competition and price pressure
- On average, payments take between 30 and 60 days
- Rising insolvencies and fraud issues impact the sector



Overview					
Credit risk assessment	significantly improving	improving	stable	deteriorating	significantly deteriorating
Trend in non-payments over the last 6 months				✓	
Development of non-payments over the coming 6 months			~		
Trend in insolvencies over the last 6 months			~		
Development of insolvencies over the coming 6 months				✓	
Financing conditions	very high	high	average	low	very low
Dependence on bank finance				✓	
Overall indebtedness of the sector			V		
Willingness of banks to provide credit to this sector			~		
Business conditions	significantly improving	improving	stable	deteriorating	significantly deteriorating
Profit margins: general trend over the last 12 months			~		
General demand situation (sales)			✓		
					Source: Atradiu

ICT plays a pivotal role in the German economy, employing more than one million people and having generated about 150,000 new jobs over the past five years. The German ICT market is dominated by a few big groups, but characterised by a high number of mid-sized companies.

According to the German Federal Association for Information Technology, Telecommunications and New Media (BITKOM), ICT sales increased 2.2% in 2017, to EUR 151.8 billion. This trend is expected to continue in 2018, with a 1.9% growth rate forecast.

While turnover in the telecommunications segments is expected to rise only 0.4% this year after levelling off in 2017, IT sales (IT hardware, software and services) are forecast to increase 3.1%. Within this segment, software sales (up 6.3%) are expected to be the main driver of growth as in previous years.

Despite continued sales growth, most ICT businesses continue to operate on very tight margins due to fierce competition in all subsectors, while equity strength is below average. Fierce competition and sharp price erosion have led to an ongoing trend of consolidation. Unless they are well-established in niche products, smaller companies are – and will continue to be – the losers in this cut-throat environment.

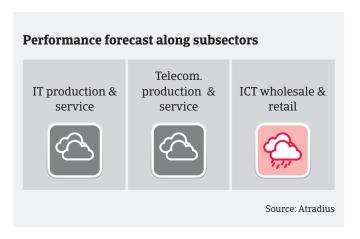
On average, payments in the ICT industry take between 30 and 60 days. Due to the more difficult market conditions (e.g. price wars), payment delays and insolvencies are expected to increase in 2018 (in 2017 ICT business failures increased 1.5%). This is bucking the overall trend, as German business insolvencies decreased 6.6% in 2017 and are forecast to decline further in 2018, by about 6%.

Germany: ICT 2017 2018f 2019f GDP growth (%) 2.5 2.3 1.8 Sector value added growth (%) 42 3.9 3.4 Average sector growth over the past 3 years (%) 3.0 Average sector growth over the past 5 years (%) 3.3 Degree of export orientation average Degree of competition very high Sources: Macrobond, Oxford Economics, Atradius

Due to fast changing technology in this industry and low margins, the wholesale and retail of electronic appliances segment is especially susceptible to fraud. Several ICT businesses like IT-distributors of tablets and mobile phones have been involved (sometimes inadvertently) in missing trader intra-community (MTIC) fraud cases (i.e. the exploitation of the VAT rules which state that cross-border transactions between EU member states are zero-rated for VAT purposes).

We are particularly cautious about this, as even innocent businesses caught up in a so-called "VAT carousel" can be left bearing significant tax liabilities, leading to liquidity issues, "freezing" of accounts by tax authorities as well as the negative effect of losing sales to customers that are cautious of buying from prosecuted suppliers.

German ICT sector Fast product innovations lead to new customer demand Strengths packages) often lead to positive purchase decisions and customer High innovation pressure/high investments have to be financed Weaknesses The increasing interchangeability of products makes it difficult for companies to distinguish themselves from competitors High competition and high pressure on prices lead to low margins Source: Atradius In general, our underwriting approach for the ICT industry is neutral to cautious due to the issues mentioned above and the fact that credit insurance claims have increased over the last couple of months. As ICT is a very fast and innovative industry with sharp price erosion and high competition, we require comprehensive information (e.g. interim figures, cash budgets, overview of bank lines etc.) on each company we underwrite.



Japan

- Further sales growth expected in the coming years
- On average, payments take between 90 and 120 days
- Low number of protracted payments



Overview					
Credit risk assessment	significantly improving	improving	stable	deteriorating	significantly deteriorating
Trend in non-payments over the last 6 months			~		
Development of non-payments over the coming 6 months			~		
Trend in insolvencies over the last 6 months			~		
Development of insolvencies over the coming 6 months			✓		
Financing conditions	very high	high	average	low	very low
Dependence on bank finance		~			
Overall indebtedness of the sector		✓			
Willingness of banks to provide credit to this sector	~				
Business conditions	significantly improving	improving	stable	deteriorating	significantly deteriorating
Profit margins: general trend over the last 12 months			~		
General demand situation (sales)		~			
					Source: Atradius

The Japanese ICT industry is well established and holds a global reputation for excellence and innovation. Japan is the third largest ICT market in the world after China and the USA, with well-known companies such as Hitachi, Sony, Panasonic, Fujitsu and NEC having a large market share.

The market will continue to be robust, reflecting the affluence of local customers and sophistication of the enterprise base. There should be a boost in 2019 and 2020 as the country prepares to host the 2020 summer Olympics in Tokyo.

Computer hardware sales are expected to amount to JPY 2.45 trillion (EUR 18.6 billion) in 2018 and to increase modestly to JPY 2.54 trillion (EUR 19.3 billion) in 2021, resulting in a compound annual growth rate (CAGR) of 1.2%. This is primarily due to a strained PC market with longer replacement cycles and a squeeze on tablet and low-end notebook purchases due to smartphone use.

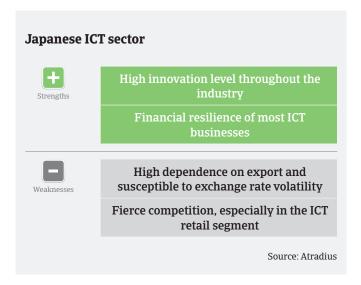
Software sales are expected to amount to JPY 3.83 trillion (EUR 29.1 billion) in 2018 and to increase to JPY 4.31 trillion (EUR 32.8 billion) in 2021, a CAGR of 4%. Investment in data analytics, cyber security and cloud solutions offers a growth opportunity for software vendors.

IT services sales are expected to amount to JPY 18.28 trillion (EUR 139.2 billion) in 2018 and to increase to JPY 20.64 trillion (EUR 157.2 billion) in 2021, a CAGR of 4.1%, fuelled by higher spending in 2019 and 2020 ahead of the Olympic Games in Tokyo and increased ICT investment by Japanese businesses.

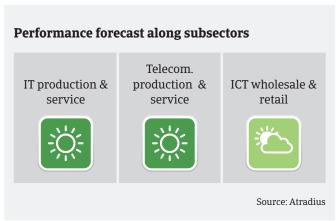
Japanese ICT companies obtain finance easily as banks are very willing to lend and interest rates are low. The current government is very supportive of bank lending, putting pressure on banks to even lend to weaker companies. Therefore, high gearing ratios are common in Japan.

Japan: ICT 2017 2018f 2019f GDP growth (%) 1.7 1.5 0.9 Sector value added growth (%) 0.7 1.5 1.0 Average sector growth over the past 3 years (%) 0.6 Average sector growth over the past 5 years (%) 1.0 Degree of export orientation very high Degree of competition very high Sources: Macrobond, Oxford Economics, Atradius

On average, payments in the ICT industry take between 90 and 120 days. The business culture in Japan promotes prompt payment, and therefore the number of protracted payments is low. The insolvency level in the ICT sector is low and is expected to remain stable in 2018.



Our underwriting stance for this industry is open due to stable growth and positive outlook, the low insolvency level, good payment experience and the fact that the market is dominated by large corporates and well-established domestic businesses. The financial profile of ICT producers and service providers is generally good, with the majority of companies generating high revenues and profits along with strong balance sheets. While the ICT wholesalers and retailers segment is highly competitive with generally low profit margins, credit insurance claims have remained low so far.



United Kingdom

- Uncertainty looms over the post-Brexit ICT market
- Further declining IT hardware sales
- On average, payments take around 60 days



Overview					
Credit risk assessment	significantly improving	improving	stable	deteriorating	significantly deteriorating
Trend in non-payments over the last 6 months			~		
Development of non-payments over the coming 6 months			~		
Trend in insolvencies over the last 6 months			~		
Development of insolvencies over the coming 6 months			✓		
Financing conditions	very high	high	average	low	very low
Dependence on bank finance				~	
Overall indebtedness of the sector				✓	
Willingness of banks to provide credit to this sector		~			
Business conditions	significantly improving	improving	stable	deteriorating	significantly deteriorating
Profit margins: general trend over the last 12 months			~		
General demand situation (sales)				~	
					Source: Atradius

In 2017 the British ICT industry was worth more than GBP 97 billion, up 30% compared to 2012. However, increased uncertainty after the Brexit decision has resulted in lower market expansion. There are concerns that Brexit could hamper growth by creating a talent shortage and produce a wider skills gap.

In 2017 demand for hardware products has continued its decline that began in 2014, as consumers are increasingly using their smartphones as their only computing device, cannibalising PC and laptop sales, while technological improvements are not sufficient to generate real growth in this segment. At the same time, software and data services remain the main drivers of ICT growth, together with cloud computing and the Internet of Things. Data centres, cloud computing and the continued development of mobile apps and new technology (e.g. wearable technology) are the areas that are anticipated to drive the sector forward in the coming years.

2017 was a record year for ICT-related investments in the UK, with significant contributions from Amazon, Apple and Google. British tech firms (including ICT) attracted more venture capital funding than any other European country in 2017, despite the looming uncertainty caused by the Brexit decision.

That said, this uncertainty is one of the reasons why UK businesses turned to be less willing to commit to long-term IT projects, with budgets being revised, plans postponed and non-essential upgrades being delayed. This had an negative effect on the already low margins of many ICT businesses, especially in the ICT retailers segment. Pressure on margins also rose last year as input costs increased due to the pound Sterling depreciation, reducing the purchasing power of many ICT companies that are importing/purchasing in EUR/USD and selling in GBP. That said, the recovery of the exchange rate in recent months and a rather stable economic outlook for 2018 should help the ICT industry

UK: ICT 2017 2018f 2019f GDP growth (%) 1.8 1.7 1.7 Sector value added growth (%) 3.6 3.1 3.4 Average sector growth over the past 3 years (%) 5.8 Average sector growth over the past 5 years (%) 3.9 Degree of export orientation low Degree of competition high Sources: Macrobond, Oxford Economics, Atradius

in the short-term. Adopting appropriate hedging mechanisms is vital for businesses to limit their risk exposure.

On average, payments in the British ICT sector take around 60 days. Payment experience has remained good so far, and the level of protracted payments remains low. The number of non-payment cases has not increased in the last 12 months, and this positive trend is expected to continue. The level of ICT insolvencies is average, and no substantial increase is foreseen for 2018. However, competition continues to be fierce and businesses' margins are expected to remain under pressure, with minimal barriers to entry.

For the time being, our underwriting stance for the British ICT sector remains open. That said, given the current economic conditions, we focus our discussions with buyers around foreign exchange hedging mechanisms/techniques adopted to ensure they are sufficiently covered, as many companies have not faced this risk over the past couple of years.

British ICT sector

Technology developments maintain high demand from most industry sectors

Investment in data centres/cloud computing continues to gather pace

Generally attractive for investors

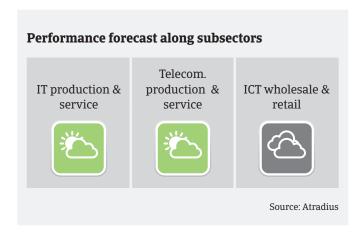
Increased economic uncertainty due to Brexit decision

High level of competition and low margins

Hardware sales continue to decline

Source: Atradius

We are also closely monitoring ICT suppliers to the financial services sector, which is a major market for ICT sales in the UK. The potential relocation of financial institutions to mainland Europe in the wake of Brexit could have have a knock-on effect on ICT suppliers. While the British government has sought to reassure major finance firms that the industry would be protected in a Brexit trade deal, the real outcome remains to be seen.



United States of America

- Margins remain under pressure despite sales growth
- No insolvency decrease expected in 2018
- Import tariffs potentially with adverse effects



Overview					
Credit risk assessment	significantly improving	improving	stable	deteriorating	significantly deteriorating
Trend in non-payments over the last 6 months			~		
Development of non-payments over the coming 6 months			~		
Trend in insolvencies over the last 6 months			~		
Development of insolvencies over the coming 6 months			✓		
Financing conditions	very high	high	average	low	very low
Dependence on bank finance		~			
Overall indebtedness of the sector		~			
Willingness of banks to provide credit to this sector		V			
Business conditions	significantly improving	improving	stable	deteriorating	significantly deteriorating
Profit margins: general trend over the last 12 months			~		
General demand situation (sales)			~		
					Source: Atradiu

As in 2016, in 2017 the US ICT market benefitted from stable economic growth and robust private consumption, helped once again by wage growth, employment gains and still lower energy prices. Consumer spending has averaged close to 3% over the past few years, and this positive trend should continue in the short-term.

According to the Consumer Technology Association (CTA), retail revenues in the US consumer technology industry are expected to hit a record-breaking USD 351 billion in 2018, exhibiting growth of 3.9% in 2017. Growth in the smartphone segment is expected to slow down somewhat, as producers face higher cost pressure due to the continuing price increase for key components. CTA expects sales of connected devices to reach 715 million units in 2018, driven by smart speakers/home devices, virtual reality (VR), drones, and wearables.

However, consumers remain somewhat cautious in their discretionary spending and are continually looking for best value for price. Despite the healthy growth rates in many ICT segments, high competition is still leading to low pricing strategies and margin compression for distributors and retailers alike. The degree of competition remains fierce and margins remain under constant pressure. Any margin gains are likely to come from new product lines or a greater portion of sales being derived from services, which tend to carry higher margins.

Margins of manufacturers are impacted by the already high market penetration of mature product categories and the subsequent need for innovation, which leads to higher R&D costs. Many ICT businesses continue to rely heavily on bank facilities and external financing, resulting in highly leveraged balance sheets. The resulting high interest can also have a substantial impact on net

USA: ICT 2018f 2019f 2017 GDP growth (%) 2.3 2.8 2.4 Sector value added growth (%) 4.9 3.0 4.5 Average sector growth over the past 3 years (%) 6.7 Average sector growth over the past 5.3 5 years (%) Degree of export orientation average Degree of competition high Sources: Macrobond, Oxford Economics, Atradius

earnings and the ability to service such debt. The spread of maturity dates and ability to refinance at lower interest rates will determine any imminent risk. As most ICT companies are highly working capital instensive businesses, further draws or debt issuances are likely.

Payments in the ICT sector commonly range between 30 and 90 days, but in some cases can take even 120 days. When payment delays occur, they generally relate to disputes over product pricing or other issues, as opposed to liquidity concerns. Manufacturers often offer price protection or discounts on products in order to move inventory ahead of the rapid innovation of technology experienced in the market. This can lead to disputes and ultimately an increase in non-payments until the issues can be

US ICT sector

Semiconductor sales remain strong led by high demand for memory chips

Wide consumer acceptance of new devices, particularly in terms of mobility

Trend toward cloud-based applications and computing benefits software companies

Increasing focus on cybersecurity

Demand for desktop PCs remains weak

Fierce competition leading to pricing pressure and low margins

Short product life cycles and capital intensive industry

Heavy dependence on bank or vendor financing

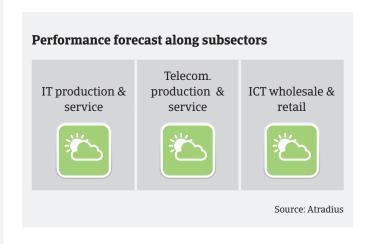
Source: Atradius

resolved. ICT insolvencies are not expected to decrease in 2018, given the ongoing high level of competition, the abundance of start-ups and the ever short product cycles.

Currently the impact of potential import tariffs and any deterioration of trade relations still remains to be seen. A first round of import tarriffs imposed by the US administration deliberately left out most ICT products. However, after China responded with retaliatory measures, Washington is looking for additional tariffs, likely targetting smartphones, computers and TVs, which in turn would lead to higher end prices. It is expected that US ICT retailers can absorb some of the costs to a certain degree, and some ICT companies are able to shift production from China to other countries, cutting the final bill for US consumers. Companies with complex supply chains, mainly those in high tech industries, are able to change the way their internal costs are charged among subsidiaries to lower their tariff bill. However, ICT supply chains would be hurt as ICT products assembled in China and exported to the US heavily depend on the imput of US-made components (semiconductors, software and other items). Therefore, there is a potential negative impact mainly on the component supply side, but also on the US-end consumer (higher sales prices) should Sino-US trade relations deteriorate.

Despite the uncertainty surrounding tariffs, our underlying underwriting strategy remains cautiously open, with a focus on favourable subsectors such as smartphones, tablets and health technology products along with other emerging technologies, while steering clear of unfavourable or declining subsectors like PCs.

When analysing buyers, the level of transparency in their products and their life cycles – including any insight into buyback arrangements for old or obsolete products – is key. With short life cycles and technology quickly becoming obsolete, it is important for us to know which end markets and subsectors are being served.



Market performance at a glance

Australia

- The Australian ICT market is forecast to grow further in 2018 and 2019, with both state and federal governments remaining key investors in IT projects, accompanied by business and consumers ICT spending which is driven by economic growth and technological progress.
- The market is highly competitive in the distribution, retail and system integrators segments. However, in general, ICT is a profitable segment with steady margins. Across subsectors ICT retail margins are lower compared to margins earned by value added system integrators.
- Many ICT businesses are highly leveraged, either via debtor financing for working capital management or through term loans. Banks are quite open and willing to offer loans to the industry. It is important for ICT business to have healthy cash flow as a lot of companies earn extra margin by the early settlement of invoices, and therefore having working capital funding in place is quite important.
- Payments in the ICT sector generally take between 30 days and 60 days from invoice date or between 30 days and 45 days end of month (EOM). Payment experience over the past two years has been good so far and the level of insolvencies is low, with no major change expected in 2018.
- Our underwriting stance remains generally open for all ICT subsectors. The IT producers and service segment generally performs well with profitable businesses, and many companies in the telecommunication segment are financially strong. In contrast, we are more cautious with ICT retailers, as this subsector accounts for most credit insurance claims in the industry.
- For higher coverage we usually refer to Personal Property Security Register or other risk mitigating measures, including Directors Guarantee if needed.

Australia: ICT					
	2017	2018f	2019f		
GDP growth (%)	2.3	2.7	2.6		
Sector value added growth (%)	2.1	4.1	4.3		
Average sector growth over the past 3 years (%) 5.0					
Average sector growth ove 5 years (%)		4.5			
Degree of export orientation		very low			

Sources: Macrobond, Oxford Economics, Atradius

Performance forecast along subsectors

Degree of competition



Source: Atradius

high



France

- According to the research institute GfK, in 2017 the French mobile phone market decreased 5.2% in volume in 2017, but sales rose 2.5% to EUR 8.3 billion due to higher prices (increased share of more expensive smartphones).
- The French IT hardware market remains under pressure in 2018 after a turnover decrease of 4% to EUR 5.2 billion in 2017. Tablets and PC sales are severely impacted by competition from other devices such as smartphones, a high equipment rate, extended replacement cycles and pressure on prices due to shortage of some electronic components.
- The IT software and services sector grew 3.4% to EUR 53.7 billion in 2017, according to the industry federation Syntec/IDC, benefitting from increased digital transformation projects by businesses, the upward trend of IT externalisation and cloud computing expansion. IT services will remain a main driver of growth in 2018, with an expected turnover increase of 3.6% in 2018. SMAC (Social, Mobile and Analytics in the Cloud) and SaaS (Software as a Service) technologies are expected to record further high sales increases.
- Due to the shifting market conditions, many ICT businesses need to adapt their business model. Wholesalers increasingly try to move away from pure hardware selling, to offer more added value products and IT services in order to improve their profitability, as this offers higher revenues and better margins. However, such efforts are not easy to make and require highly skilled management and staff.
- On average, payments in the French ICT sector take around 60 days, and we expect payment delays and insolvencies to remain low and generally stable in the coming months. That said, our underwriting position in the ICT segment remains generally neutral as sudden business failures cannot be ruled out due to the fast changing and very competitive market environment with strong price pressure.
- Especially smaller ICT businesses with an unflexible cost structure and a concentrated customer or supplier portfolio could face difficulties, while many IT hardware wholesalers suffer from structurally tight margins and a low equity level.

France: ICT			
	2017	2018f	2019f
GDP growth (%)	2.0	2.1	1.9
Sector value added growth (%)	5.0	3.7	3.4

Average sector growth over the past 3 years (%)	3.5
Average sector growth over the past 5 years (%)	2.8
Degree of export orientation	low
Degree of competition	high

Sources: Macrobond, Oxford Economics, Atradius

Performance forecast along subsectors









India

- The IT and IT Enabled Services (ITES) industries have been one of the key driving forces fuelling India's economic growth, contributing about 8% to India's GDP in 2017. The IT share in the country's total service exports amounts to more than 45%.
- In 2018 the ICT sector is expected to grow 9.1%. In an international comparison of ICT markets, India continues to lead in terms of growth rates. Key growth drivers are improving economic indicators, growing disposable income, penetration into rural markets, tier 2 and tier 3 cities, online and digital marketing, the e-commerce boom and government investments in the industry.
- However, despite the robust growth rates, the industry continues to be characterised by stiff competition and cheap imports causing pricing pressures, especially for smaller IT resellers and distributors who are working on very low margins.
- On average, payments in the Indian ICT sector take around 90-120 days. The implementation of a nationwide Goods and Services Tax (GST) in July 2017 first created some ambiguity in the tax structure, leading to delays in sales and invoicing. However, despite administrative challenges which caused temporary cash flow issues, the instances of non-payment notifications and credit insurance claims in the IT distributor segment were lower in 2017 compared to 2016. We expect no substantial increase in payment delays and insolvencies in 2018.
- Our underwriting stance is generally open for IT production and services, as this subsector comprises many large corporates (mostly listed) with sound financials and business prospects remain favourable. (India is a prominent outsourcing destination, accounting for about 55% market share in the global services sourcing business.)
- For the telecommunication segment our underwriting stance is neutral. While mobile-phone penetration and internet usage are increasing, competition is fierce and prices are under pressure with little or no product differentiation.
- We are also neutral with the ICT distribution and retail segment, as this sector comprises many small businesses (mostly proprietorship/partnership companies) and is characterised by fierce competition and price pressure. Many players hold only a moderate financial risk profile, i.e. stretched liquidity and thin margins with limited or no value addition.

India: ICT 2017 2018f 2019f GDP growth (%) 6.3 7.3 7.0 Sector value added growth (%) 9.8 9.1 8.7

Average sector growth over the past 3 years (%)	9.8
Average sector growth over the past 5 years (%)	8.8
Degree of export orientation	average
Degree of competition	very high

Sources: Macrobond, Oxford Economics, Atradius

Performance forecast along subsectors









3.4

Italy

- According to the industry association Assinform, the Italian ICT market grew 1.9% in 2017, to EUR 66.1 billion, and in 2018 another 1.8% increase is expected. Main growth segments are IT services, hardware and e-commerce (the latter expected to increase 26% in 2018 to EUR 29 billion, from EUR 23 billion in 2017).
- In the business-to-business segment larger companies still account for more than 60% of total domestic IT expenses, while demand from the public sector and the IT spending capacity of SMEs remains modest.
- In most ICT segments margins remained stable in 2017. Due to rather modest organic growth opportunities and market adjustment in the distribution segment, players strive to expand through acquisitions and specialisation (customised and value-added services).
- Both financial gearing and dependence on bank loans are high in the Italian ICT sector. Payments in the industry generally take around 120 days, payment experience has been good so far and the level of notified non-payments is low. The amount of ICT business failures is rather low compared to other Italian industries, and expected to remain stable in 2018.
- Our underwriting approach remains generally open for all ICT segments, due to the benign credit risk situation, the general need of Italian businesses to increase IT spending in order to boost productivity, and increasing demand for innovation through digitalisation, cybersecurity, Big Data, electronic payments, cloud computing.
- However, as in 2017, low value added wholesalers and smaller players have to be monitored more closely, as they are more exposed to financial distress related to working capital requirements, especially when depending on large clients and the public sector. We also maintain a more cautious approach on wholesalers with low value added services and poor critical mass and any businesses which are highly dependent on sales and services to the public sector (due to common late payments by public bodies).

Italy: ICT			
	2017	2018f	2019f
GDP growth (%)	1.5	1.5	1.1
Sector value added			

-2.3

Average sector growth over the past 3 years (%)	-0.2
Average sector growth over the past 5 years (%)	-0.4
Degree of export orientation	low
Degree of competition	very high

Sources: Macrobond, Oxford Economics, Atradius

1.8

Performance forecast along subsectors



growth (%)

Telecom. production & service



ICT wholesale & retail





The Netherlands

- The Dutch ICT industry accounts for about 4.5% of GDP with approximately 365.000 employees active in the sector. About 95% of ICT businesses have less than 10 employees, and there are only 200 companies with a size of over 100 employees.
- In line with the robust economic performance, ICT turnover grew 5.7% in 2017 and is expected to increase 6% in 2018 and 5% in 2019. Competition in the market is high, and there have been a couple of large takeovers and mergers and acquisitions in 2017 and early 2018. While ICT distributors are becoming larger, many smaller companies are changing their business model to have a more service-oriented approach.
- In 2017 debt ratios have increased within the sector, and it is expected that this trend will continue over the next 2-3 years.
 Currently banks are generally willing to lend to the industry.
- On average, payments in the ICT industry take between 30 and 60 days. The number of payments delays and insolvencies is low and expected to remain stable in 2018.
- Due to the solid performance and benign credit risk situation, our underwriting stance for this industry remains generally open. However, given the highly competitive environment and the fact that many ICT businesses have low margins, the requirements for financial information on ICT buyers are very high.

Netherlands: ICT								
	2017	2018f	2019f					
GDP growth (%)	3.2	2.5	1.7					
Sector value added growth (%)	3.2	3.5	2.8					
	_							

Average sector growth over the past 3 years (%)	3.3
Average sector growth over the past 5 years (%)	3.1
Degree of export orientation	average
Degree of competition	high

Sources: Macrobond, Oxford Economics, Atradius

Performance forecast along subsectors







South Korea

- South Korea accounts for about 20% of global semiconductor production and 60% of memory chips manufacturing. Both segments recorded high growth over the past 12 months. This, together with robust exports of microchips used in smartphones, computer servers and data centres, strongly contributed to a GDP growth of more than 3% in 2017. The ICT growth outlook remains positive in 2018 due to further export expansion, higher spending by the public sector and rebounding consumer confidence.
- The sector is dominated by a number of large, family-controlled industrial groups (chaebols). Despite the concentration of bigger players, the sector is very mature and still considered highly competitive. Even with some downward pressure, profitability of the sector is expected to remain generally stable in 2018.
- In the South Korean ICT sector equipment for information, communication and broadcasting accounts for 73%, services for 16% and software for 11%. This reveals the industry's overwhelming dependence on hardware, failing to keep pace with the global trend of focusing on software. However, the South Korean government has begun to sharply increase investment to support R&D in areas like autonomous cars, Artificial Intelligence, Internet of Things-fitted electronics, semiconductors and displays.
- While gearing and dependence on bank loans are still high in this sector, financial institutions are in general supportive of most businesses, and the overall indebtness of the industry decreased in 2017 compared to 2016. Corporate borrowing rates are rather low, and companies have diversified borrowing funding sources (e.g. banks, bond market etc.).
- On average, payments in the ICT industry take between 60 and 120 days. In general, payment behaviour has been good over the past two years, and the number of payment delays and insolvencies is rather low.
- Our underwriting stance continues to be open for ICT businesses, supported by the good availability of financial and business information and the stable track record for the past few years. Main downside risks are rising protectionism of the main trading partners (China, US), and strong competition from neighbouring countries such as Japan.

South Korea: ICT							
	2017	2018f	2019f				
GDP growth (%)	3.1	2.8	2.6				
Sector value added growth (%)	1.8	3.6	3.0				

Average sector growth over the past 3 years (%)	1.4
Average sector growth over the past 5 years (%)	2.9
Degree of export orientation	high
Degree of competition	high

Sources: Macrobond, Oxford Economics, Atradius

Performance forecast along subsectors



Telecom. production & service



ICT wholesale & retail





United Arab Emirates

- The ICT value chain in the UAE encompasses vendors, distributors, power retailers, resellers and other small retailers, while manufacturing is not present. Most of the vendors and distributors are present in Dubai's free trade zones and redistribute to the wider Middle East.
- Despite the crude oil price rebound in 2018, downward pressure on the economy and discretionary spending, including the ICT segment, continues to persist. According to BMI Research, ICT spending in the Middle East is estimated at USD 235 billion in 2018, which is just a slight increase compared to 2017.
- The UAE's ICT market remains characterised by high competition, single-digit margins, low entry barriers, lack of support from banks and stagnating growth in subsegments like PCs and desktops. The imposition of new taxtion and customs duties on certain consumer durables and IT products sold in India and persistent political instabilitiy in the Middle East region has negatively impacted the overall demand of ICT products.
- Payment delays and protracted defaults have sharply increased since 2015, as have run-away cases, which become increasingly more frequent due to cash problems in this industry. Although we have seen some signs of stabilisation since the second half of 2017, the sector remains fragile and volatile, with businesses' profit margins expected to shrink further in 2018. One of the main reasons for the increased default rate remains the lack of support from banks in the form of reduced or cautious lending. The payment delays and insolvency outlook remains subdued in 2018.
- We continue to adopt a prudent and selective approach on buyers in the ICT sector in UAE, especially for the wholesalers and retail segment, which has severely suffered from lower demand, high competition and deteriorated margins. Special attention is also given to distributors and resellers exporting to high political risk countries in the Middle East and Africa. In the telecommunication sector we maintain a prudent approach with smaller players. In any case, the availibility of the latest audited financials and updated trading experience are key requirements for business reviews in the ICT sector.

United Arab Emirates: ICT

	2017	2018f	2019f
GDP growth (%)	1.7	2.7	3.8
Sector value added growth (%)	5.6	4.3	4.5

Average sector growth over the past 3 years (%)	4.7
Average sector growth over the past 5 years (%)	5.2
Degree of export orientation	high
Degree of competition	high

Sources: Macrobond, Oxford Economics, Atradius

Performance forecast along subsectors





Telecom. production & service



ICT wholesale & retail

Industries performance forecast per country

	Agriculture	Automotive/ Transport	Chemicals/ Pharma	Construction Const.Mtrls	Consumer Durables	Electronics/ ICT	Financial Services
Austria		1911		3		4	->
Belgium	8	**	->	8		**	4
Czech Rep.		8		2,00		8	*
Denmark	5	8	*	8	in the second	8	
France	1111	8	->	8		8	*
Germany	8	8	->	8		8	*
Hungary	8	8		8	8	8	4
Ireland	8	8	*	8		8	*
Italy	*			3,00	8		*
The Netherlands	*	8	->	Č		*	*
Poland		6,00	4	6,00	2,11	670	Č
Portugal	4	8	2707	2701		4	600
Russia	170	4	6,07	6,00		670	4
Slovakia		**	**	6,00		4	Č
Spain		*		2,00		4	4
Sweden	**	4	*	8	Č	**	*
Switzerland	*	4		6,00		4	->-
Turkey	*	**	4	6,00		644	*
UK	**	4		2,00		4	4
Brazil			8	270	%	5	*
Canada	->	4	4	4		4	->-
Mexico		**	4	2,00		4	*
USA		**	**	4		*	*
Australia	*	277	4	2700		**	*
China	->	4	8	2700		4	->
Hong Kong	N/A	4	8	8		*	*
India		4	*	1700		8	8
Indonesia	4	4	8	8		8	*
Japan		4	4	4		*	*
New Zealand	*	1777	*	*		*	*
Singapore	*	277	8	270		8	*
Taiwan	N/A	277	8	8	**	*	4
Thailand	<u> </u>	*	8	4	6	8	4
United Arab Emirates	*	8	4	4	277	•	4

	Machines/					
Food	Engineering	Metals	Paper	Services	Steel	Textiles
	*			**	1,111	1,111
		8	2711	2711	**	200
	8			8	4	200
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8	8	4	1711	8	8	1,11
	*	4	1711		8	1,111
		1111	4		100	1,111
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**	->\	4	4	8	8	100
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	1711	4	4	*	8	4
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	8	4	in the second			
	8	27.47			1711	- Control
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	8	2777	1,111	8	2,77	277
**	8	4	· ·		4	1777
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**	8		4	8	2,77	8
	<u>A</u>	4	4	*	8	200
8	8	8	900	270	277	277
					277	4
				4	277	4
2707	8	2711	8	Č	1,11	1911





Industry performance

Changes since April 2018

Europe

Czech Republic

Transport



Down from Good to Fair

The Czech transport market is already highly saturated and impacted by higher labour costs (lack of drivers). A stronger currency has decreased the international competitiveness of Czech transport businesses.

France

Construction/Construction materials



Up from Poor to Fair

Business insolvencies in the sector have decreased 10% year-on-year in 2017. At the same time, building activity continues to grow in 2018, mainly driven by the new residential building segment (which is supported by government measures and low interest rates). The performance of the public works subsector has improved due to the Grand Paris project.

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