crédito y caución
Atradius Group

market monitor

Focus on chemicals/pharmaceuticals performance and outlook

June 2014

Vital elements

While chemicals and pharmaceuticals are closely related industries, 'chemicals' are often viewed cynically as harmful to life while 'pharmaceuticals' are seen as essential to good health. As any scientist will tell you, the truth is that chemicals are essential to life and to industry – and indeed are the building blocks of the universe.

No wonder then that our Market Monitor reports show overall a continuing demand for both chemicals and pharmaceuticals, even if in some of the markets we review the sector has fallen victim in recent years to global competition and rising costs.

In the United States, chemicals are used in the production of 96% of manufactured goods. There, the fortunes of the chemicals industry are following the upward path of the economy, and the development of shale gas and liquefied natural gas has proved a boost to low cost US exports. Neighbouring Mexico has benefited from the US recovery, with producers of plastics, resins and specialised chemicals seeing increased demand from the reviving US car market.

There's a mixed picture in Europe. Despite a subdued domestic market, Italy's export oriented chemicals industry is proving resilient. The Spanish chemicals industry too has seen robust export growth, while its pharmaceuticals industry has been hit by rationalisation in the National Health Service. In Germany, chemicals and pharmaceuticals are both performing well, although expiring patents are reducing pharmaceutical profits. With weakening global competiveness, Dutch chemical exports are faring better in Europe than in the rest of the world.

In Asia, China's chemicals and pharmaceuticals industries are both seeing high growth, but new laws on environmental protection are likely to impact small businesses that do not meet the required standards. The Japanese chemicals industry is massive, ranking behind only China and the US in global market share. Although the depreciated yen has made imported raw materials more expensive, it has also boosted Japan's chemical exports.

China

- **Strong growth in all subsectors**
- **Payments take between 60 and 120 days**
- **Smaller businesses remain vulnerable**

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

As in 2013, the Chinese chemicals and pharmaceuticals sector continues to achieve very high growth rates, with the pharmaceuticals market in particular showing high growth potential in the coming years. However, smaller Chinese chemicals and pharmaceuticals players are often facing solvency and liquidity issues or lack financial transparency.

Petrochemicals and basic inorganics/polymers

China's petrochemicals industry kept growing in 2013 with sales increasing 9.2% year-on-year to CNY 13.3 trillion (US$ 2.2 trillion) and profits increasing 8.8% to CNY 893.3 billion (US$ 145.3 billion) despite the subsector still suffering from weakening downstream markets and surplus capacity. In 2014 sales and profits are forecast to grow 9.5% and 10% respectively.

In 2013, ethylene output was up by around 7% and output of primary plastics up 7%, while plastic products grew 3%. Growth in ethylene output came after a dismal performance in 2012, when production fell by over 2% to under 15mn tonnes, in spite of 20% growth in cracker capacity to 21.56mn tonnes.

The future risk factors for the petrochemicals industry are still high oil prices, trade liberalisation, bottlenecks in resources and a requirement for sustainable development. Higher oil prices have already hit the profits of refiners, as China's energy supply regulations have restricted them from passing on higher prices to customers. The petrochemicals sector could find itself having to compete with other industries for feedstock and, if prices are high, margins could be further eroded.

China is currently building a considerable number of petrochemicals production facilities along the value chain, which are likely to contribute to a rise in production capacity over coming years. However, besides some notable mega-projects, these include many small-scale operations which may never see the light of day because of government concerns about environmental damage from certain projects located along major rivers. China's environmental protection law, passed in April 2014, will come into effect in 2015. In the short term, SMEs would be affected significantly if it is found that they have substandard factories, in which case their businesses will be suspended or shut down. However, in the long term the entire industry will become more high-tech, energy efficient and environmentally friendly.

Overcapacity is still a problem in several petrochemicals subsectors, with capacity surplus seriously harming the industry's healthy development. If the problem cannot be solved, it will pose enormous threats to the survival and development of petrochemical companies and even a 'systematic risk' to the whole industry. Technology innovations are playing a major role in solving the problem of excessive capacity, while the government's policies aim at eliminating outdated capacity and capping new capacity are being strictly enforced. According to Industrial Securities, the petrochemical industry's capacity expansion reached a record high in 2012 and this will continue for a while. Unless demand increases faster than expected, the industry will still face excessive capacity in the next one or two years.

Consumer chemicals

The overall value of consumer chemicals output increased 6.6% and reached CNY 368 billion in 2013. Profits increased 11.5%, to CNY 38 billion.

Speciality chemicals

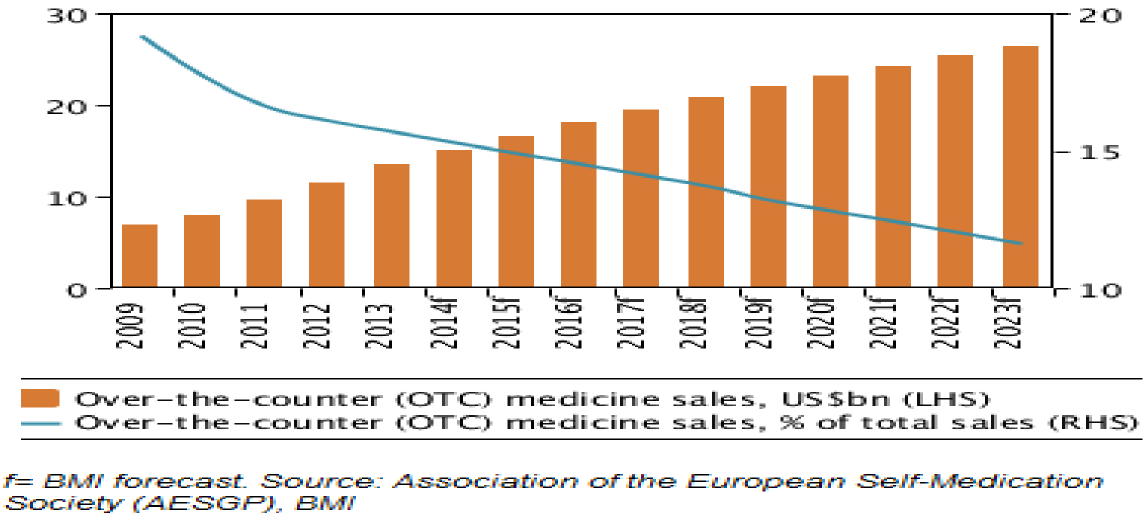
Asia will continue to lead growth in the global speciality chemicals market and China is strategically targeted as the largest market in the region. In the period January to September 2013, the output value of fine chemical enterprises was CNY 2,957 billion, a 18% year-on-year increase. Over the next five years the global speciality chemicals market is expected to record a compound annual growth rate of 3.7%, while for China an average annual increase of 8.4% is forecast.

Pharmaceuticals & healthcare

In general, China remains a key emerging market for multinational pharmaceutical firms, with double-digit rates of sales growth. In 2014 pharmaceuticals spending is expected to increase 14.7% year-on-year to CNY 610.8 billion and 15.1% in US dollar terms, to US$ 99.7 billion, while healthcare is expected to grow 13.5%, to CNY 3,601.5 billion, and 13.9% in US dollar terms, to US$ 587.8 billion. As the relationship between economic growth and greater spending on medical services strengthens, we expect pharmaceuticals expenditure in China to continue to show high growth rates in the coming years.

OTC Drug Expenditure Forecast

2009-2023



Source: BMI

The government regulates manufacturer and consumer prices, while the wholesale price is determined by the market. Product prices are listed in the catalogue of the national basic health insurance scheme. By fixing and adjusting medicine prices, the state controls the average social cost, cost margin and circulation balance, therefore complying with the regulations stipulated in the Pricing Law of the People's Republic of China.

There are some downside risks, such as the government's continued calls for greater affordability, which could result in price pressures. The government is presently using a basket of pricing reforms, including preventing hospitals from drug profiteering and tendering systems that favour cheap pharmaceuticals. While the measures reflect the authorities' intention to reduce healthcare and pharmaceutical expenditure, this would lower drug revenues for businesses. If implemented effectively, the changes would certainly be opposed by the pharmaceutical industry, which is already contending with price cuts and the difficult reimbursement regime. In the Chinese OTC medicine market, competition will become increasingly fierce as all major global players seek to penetrate this very attractive segment. The inevitable price wars and marketing campaigns will be compounded by government austerity measures. Moreover, huge differences between regional markets will punish those who have no local knowledge.

Overall, the equity strength of Chinese chemicals/pharmaceuticals businesses is still relatively good, as the major players are large corporations (usually with a state-owned background) or large joint-ventures with multinationals. Compared to those in other industries like steel and textiles, chemicals companies in general appear to have better solvency and liquidity. However, small privately-owned chemicals producers, with a low value-added contribution, often suffer from squeezed profitability and overcapacity in some segments, leading to solvency and liquidity problems. Moreover, they would be affected by China’s environmental protection law, for substandard factories, they will be suspended or shut down. The same goes for small privately-owned chemicals traders.

On average, payments in the Chinese chemicals/pharmaceuticals industry take between 60 and 120 days – unchanged compared to last year. Payment behaviour has been stable in recent months, with no increase in late payments, and we do not expect any change to this pattern in the coming months.

As in 2013, our underwriting view of the Chinese chemicals sector remains neutral and we assess buyers on a case-by-case basis. In general, the credit risks associated with buyers that have a strong background (state-owned or with a parent company that is a key player) are always lower than for small privately-owned businesses. Therefore, our underwriting stance on smaller private businesses (both producers and traders/distributors) in the basic chemicals sector is relatively restrictive because of their slim margins and the fierce competition caused by low barriers to entry. Moreover, many small-scale Chinese petrochemicals firms are burdened by poor efficiency and little opportunity to derive economies of scale.

In view of the strong growth rates and high profitability in the pharmaceuticals sector, our underwriting stance is more open than it is for the chemicals industry. However, for many small privately-owned pharmaceutical distributors we maintain a stricter strategy because of limited transparency of information and a lack of insight into buyers´ real strength. Indeed, because of that limited transparency, especially in the case of privately-owned companies, the financial information that we obtain from public sources via information agencies often does not reflect the businesses´ real financial strength. Therefore, obtaining internal accounts is vital if we are to accurately assess their creditworthiness.

Chinese chemicals sector

STRENGTHS	WEAKNESSES
World's largest producer of synthetic fibres and fourth largest producer of synthetic rubber	Chinese firms lack investment in R&D and rely primarily on imported technology
Strong domestic demand, led by rapid growth in personal consumption and consistently high rates of fixed investment, has ensured rapid growth in the sector	Profit margins remain slim for some producers due to inefficient production systems, as well as a lack of reliable, easy-to-source feedstock
New technology is being introduced, mainly through mega joint venture (JV) projects	Many small-scale Chinese petrochemicals firms are burdened by low levels of efficiency and poor economies of scale
Better project approval processes, particularly for those projects that will include new refining capacity	High crude prices and China's high energy import requirements mean that the petrochemicals sector must compete with other industrial areas for access to refined products, and there is downward pressure on margins

Chinese pharmaceuticals sector

STRENGTHS	WEAKNESSES
One of the top five drug markets in the world in terms of overall size	Complex and heavily biased drug pricing and reimbursement policy by the government, favouring local drug producers
Progressive government-sector reform in recent years	Overcapacity of cheap, basic drug production and a general focus on lower-cost pharmaceuticals
Multinationals keen to establish a significant long-term presence in China	Hospitals act as both prescribers and dispensers
Large pool of highly skilled, low-cost scientists and general labour	Government failure to implement fully internationally compliant patent laws. Lax enforcement of domestic patent laws

Italy

- **Exports remain the main driver of growth**
- **Insolvencies to level off in 2014**
- **Caution still advisable for businesses depending on low-performing domestic sectors**

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

Although Italy's chemicals industry has felt the effects of the country's subdued economic performance in recent years, it has proved more resilient than other industries thanks to a change process that began well before the economic crisis. There is more research and development (R&D) activity (the main source of innovation) than in many other European countries. In addition, Italian chemicals companies are generally export-oriented and major ones have lessened their reliance on the domestic market by internationalising production. Similarly to 2013, our underwriting stance remains generally open, although we pay closer attention to those companies highly dependent on domestic demand.

Last year, growth in Italian chemicals exports was hit by subdued global demand and the economic slump in Europe (which still accounts for 60% of Italian chemicals exports). However, the modest increase in exports (up 0.8% in volume and up 0.3% in value) at least partly compensated for lower production (down 2.2% in 2013, due mainly to a 3.6% decline in domestic demand), according to the Italian chemicals association Federchimica.

The combination of a 0.5% rebound in the Italian economy (the Italian economy contracted 1.8% in 2013) and a recovery of the Eurozone economy is forecast to drive an export led a 1.6% increase in Italian chemicals production (see chart below). While energy costs in Italy are still among the highest in the Eurozone (30% above average), they are expected to fall this year, which should help the chemicals sector.

Perspectives for chemical industry in Italy

	2013 billion euros	% change in volume 2013	% change in volume 2014
Domestic demand	61,0	-3.6	1.4
Imports	34,8	-2.5	2.0
Exports	25,4	0.8	2.6
Production	51,6	-2.2	1.6

Companies	2,780
Employment	113,200
Graduates / total employment	19%
R&D personnel / total employment	4%
HSE expenditure / turnover	2%

ETEROGENITY AMONG COMPANIES

KEY SUCCESS FACTORS

- Export propensity
- Internationalization
- Innovative and export-oriented clients
- Innovative products
- Environmental sustainability
- Anticipation of regulatory constraints

PRODUCTION LEVELS AND PROFITABILITY MORE SATISFACTORY

Note : R&D personnel, last available year 2011
HSE (Health, Safety and Environmental) expenditure, last available year 2012
Source: Federchimica

Source: Federchimica

Within the sector, there are significant differences in business performance, depending on the subsector and degree of reliance on the domestic market. As already mentioned, companies with a strong export orientation will enjoy better market conditions.

Petrochemicals represent 14% of Italy's total chemicals production. In 2013 the refinery business registered a 4.6% year-on-year decrease and its utilisation rate decreased to 66%. Domestic demand for fuel, diesel and gasoline fell last year, as higher taxes led to price increases.

Basic inorganics (28% of production): this segment consists of industrial gases, fertilizers, plastic, synthetic rubber and man-made fibres. In 2013, production fell 8%, due to lower domestic demand, and production in the industrial gas subsector decreased 3%. However, in 2014 a 2%-3% rebound is expected, due to higher demand from the food and pharmaceuticals industries.

The **plastic and synthetic rubber** segment saw a 9% drop in demand in 2013, due mainly to the decline of polyolefin, which accounts for 57% of the plastic material consumption in Italy. **Man-made fibres** registered an increase in the second part of 2013 and a consolidation of this positive trend is expected in 2014. While last year the consumption of **fertilizers** was affected by a rainy spring and by low profitability of crops, this year higher production levels and subsequently higher profitability is expected.

The **consumer chemicals** segment consists of soap & detergents and perfumes & cosmetics. The soap and detergent market suffered a 5% sales decrease in 2013, due mainly to the lower purchasing power of Italian households. However, consumer chemicals exports rose 12% in 2013 and, while the forecast for 2014 is for another 0.8% decrease in domestic market sales, exports are expected to increase 10%.

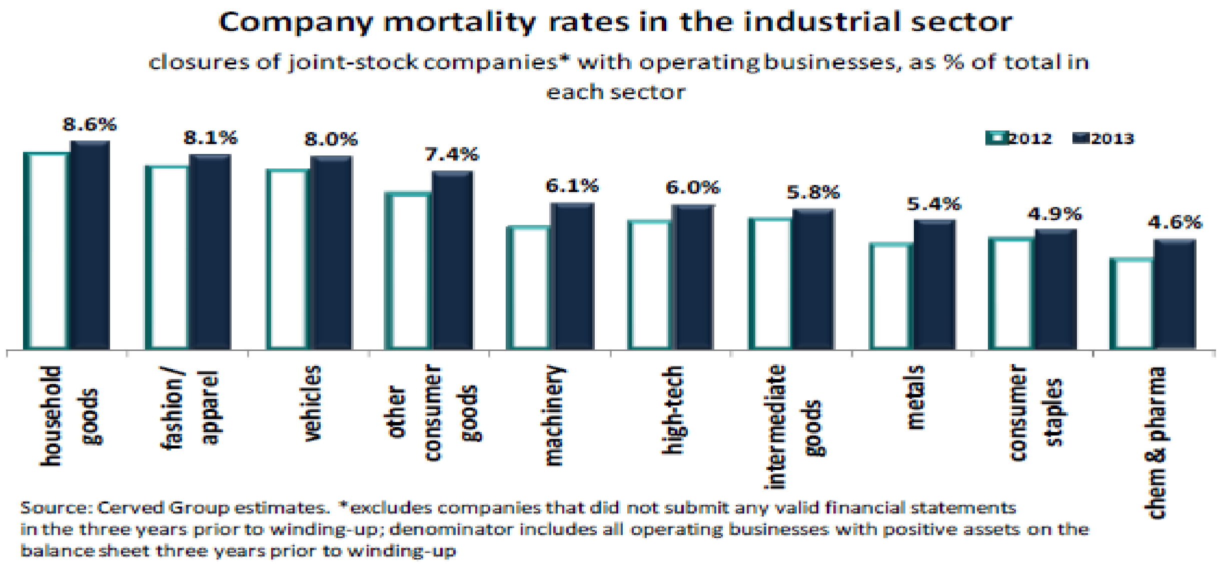
Speciality and intermediate fine chemicals: only export-oriented business grew in 2013, while companies dependent on domestic buyers from construction, automotive, furniture, and textiles recorded decreases due to stagnating domestic demand.

Paints and varnishes suffered in 2013 but recovered in the second half of the year. The industry is heavily linked to the construction segment and was affected by adverse weather conditions in the first half of 2013. However, expectations are more positive for 2014.

Pharmaceuticals maintained positive results in 2013, due mainly to a 14% increase in exports, which now account for 64% of export sales. The domestic market is also recovering.

Payment delays in the Italian chemicals industry decreased slightly in Q4 of 2013 compared to Q4 of 2012. The outlook for 2014 is stable and we do not expect major increases in non-payments in the chemicals/pharmaceuticals sector. As in 2012, compared to other Italian industries, this sector had the lowest proportion of protested bills in 2013.

Exports are the most important driver of growth and will remain so in 2014. However, domestic demand for chemicals from Italian industries that are currently struggling, such as construction, furniture, textiles and leather, should be much lower. As was the case in 2013, this will continue to damage chemicals businesses that rely heavily on those struggling sectors. The same is true of private consumption: consumer chemicals subsectors, such as soaps and detergents, will face just a modest year-on-year rebound in household consumption after three years of contraction. In contrast, the pharmaceuticals subsector will perform better than the sector average, thanks mainly to inelastic market demand.



In 2013 the number of insolvencies in the chemicals/pharmaceuticals sector grew modestly. However, the sector's insolvency rate was below the Italian average (in 2013 Italian business insolvencies increased 10%). Overall, we expect Italian business insolvencies to increase 5% year-on-year in 2014, while chemicals insolvencies should level off.

Generally, our underwriting approach to the Italian chemicals/pharmaceuticals sector remains relaxed: especially for pharmaceuticals, because of its better payment history. We continue to monitor the chemicals sector closely, anticipating possible defaults and identifying the better performing subsectors. Subsectors and businesses dependent on construction, construction material, automotive, consumer durables, furniture, textiles and leather still require particular attention, as subdued demand and the risk of overcapacity could lead to higher insolvency risks.

To assess a company's creditworthiness accurately we look for: the most updated financial accounts, including interim accounts; the age of the company; its capacity for absorbing decreasing sales and margins through self-funding and/or a healthy financial structure, and for absorbing or passing on raw material increases; and its pattern of payments. On those occasions when we have to be restrictive in our underwriting decisions, we will explain our stance fully to our customers to help them plan their sales strategy.

Italian chemicals/pharmaceuticals sector

STRENGTHS	**WEAKNESSES**
Buyers' good financial structure	The sector is highly competitive
This sector ranks 3rd in Europe and 11th in the world	Increasing prices of raw materials High energy costs
The majority of chemicals companies are export oriented	Difficulties in passing on increased raw materials prices to final consumers

Japan

- **Growth opportunities in emerging Asian countries**
- **Low rate of payment delays**
- **Insolvencies decreased in 2013**

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 chemicals industry is Japan´s second largest manufacturing sector, achieving JPY 40 trillion (EUR 289 billion) in shipment value in 2013 and accounting for more than 14% of the entire Japanese manufacturing industry. It has a more than 6% share of the global chemicals market, ranking third behind China and the US.

As with many other Japanese industries, the chemicals sector has faced rather sluggish demand until recently. However, it is expected to profit from a rebound triggered by the new economic policy of the current administration under Prime Minister Shinzo Abe, which includes a robust stimulus and fiscal programme. Domestically, Japan registered GDP growth of 1.5% in 2013 and in 2014 stable growth of 1.4% is expected. Japanese industrial production is forecast to increase 5.5% in 2014 and chemicals output to surge 4%.

Important raw material prices, such as crude oil and naphtha, were relatively stable in 2013 but higher gas prices, coupled with a depreciating Japanese YEN, eroded the profit margins of many Japanese chemicals companies. In general, Japanese chemicals businesses are highly leveraged with low liquidity ratios and long credit cycles.

Petrochemicals (base/organic chemicals such as polymers, synthetic rubber, dyes)
After a decrease in 2013 Japanese organic chemicals exports are expected to increase again in 2014, due to higher demand from Asia (which accounts for 75% of Japanese chemicals exports). Most demand will come from emerging economies such as Indonesia, Malaysia, Thailand, the Philippines and Vietnam. Major players engaged in this segment, such as Sumitomo Chemical and Mitsubishi Chemical, tend to be of significant business/revenue size with huge orders, as most of the chemicals produced have applications in a wide range of industries. Operating margins are not particularly high, but acceptable. Given the strong market presence of large Japanese players, access to liquidity is less of an issue and businesses have substantial equity.

Basic inorganic chemicals (such as salt, chlorine, caustic soda and soda ash among others)
These are important ingredients for the manufacturing of end-products such as paints, oil and fats, and agricultural chemicals. Japan imports more inorganic chemicals than it exports, which comes as no surprise since the share of end products in Japanese exports of goods is more than 50%. Japanese companies operating in this segment tend to be smaller in revenue size but appear to post healthy operating margins between 4% and 5%.

Consumer chemicals (soaps, detergents and cosmetics)
This is a growing segment as Japanese businesses can capitalise on exporting to emerging economies in Asia, where there are rising levels of disposable income and a growing consumer base. Domestically, demand is expected to taper off after the massive rise in consumer spending ahead of the consumption tax hike in April 2014.

On average, payments in the Japanese chemicals industry take 60-120 days (pharmaceuticals: 45-60 days). In view of the longer payment terms granted by most suppliers, payment delays are uncommon in the industry, while the probability of payment defaults tends to come from smaller chemical producers with limited or no competitive edge.

The chemicals/pharmaceuticals industry recorded only 616 insolvencies in 2013 - a 9.1% decrease year-on-year. The sector risk has improved overall with fewer insolvencies by larger businesses. However, the debt build-up from the mergers and acquisitions of recent years will see a wave of repayments becoming due between 2013-2016. For that reason, further consolidation seems inevitable as the industry seeks to strengthen its asset base before refinancing.

When underwriting this sector, we review buyers on a case-by-case basis. To respond accurately to a credit limit application in this sector, our main criteria relate to understanding the supplier/customer relationship:

- Payment experience with the buyer
- Length of trading relationship
- Transaction details (product supplied)
- Level of strategic relationship

We look at the buyer's competitive edge within the supply chain, its market presence/reputation and the availability of credit facilities to assist in short-term liquidity needs. We ask buyers for their full set of latest financial statements (profit & loss, balance sheet and cash flow statements), either audited accounts and/or interim accounts.

For larger buyers with a proven track record in their respective fields, we would be looking at their profitability trend, availability of credit lines from banks, ability to keep up with new technologies and respond to changing demands from their buyer industries and success in managing cash flow. If there has been any large cash outflow to fund investing activities, we assess whether it could result in overcapacity.

For smaller and/or less established buyers, we are generally more restrictive because of the small profit margins that characterise the industry due to high production costs. Smaller players are also likely to have less ability to respond and adapt to changes in market conditions and to access cash than larger businesses.

Japanese chemicals/pharmaceuticals sector

STRENGTHS	WEAKNESSES
Depreciation of YEN making exports cheaper	High energy and commodity costs
Production of specialist chemicals and high R&D expenses	Decreasing domestic demand
Significant scale of Japanese firms who are market leaders in their field	Competition from lower cost manufacturing facilities (e.g. in Vietnam)

Mexico

- **A subdued performance in 2013**
- **Chemicals traders more exposed to exchange rate volatility**
- **No increase in payment delays**

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 Mexican chemicals sector saw only slight growth and fewer orders in 2013, due to a subdued economic performance (Mexican GDP grew only 1.1% last year). Additionally, a shortage of natural gas affected chemicals and other manufacturing sectors in the second half of the year, leading to decreased production levels, while some strategic government projects were halted due to the change of presidential administration in December 2012. At the end of 2013 and the first quarter of 2014 several of these projects were restarted with a positive effect on the economy.

Stronger demand from the US also helped to boost sector performance. The Mexican automotive industry in particular has recorded steady growth in the last couple of years with the recovery of the US car market, and this has benefited the plastic subsector with increased demand for plastic injectors, industrial resins and other specialised chemicals.

A large number of Mexico's chemicals firms buy chemicals in foreign currency and sell their products in Mexican Peso. This makes them susceptible to exchange rate volatility, which can negatively affect their liquidity and solvency. Together with higher prices for gasoline and fuels (as the government has reduced subsidies) and the temporary gas shortage, higher exchange rate volatility in 2013 has led to lower profit margins.

Mexican chemicals producers are generally strongly capitalised, and some are exclusive producers of basic petrochemicals and other chemical compounds such as ethyl ether, polypropylene, and synthetic rubber. Those exclusive producers have a high market share and are usually well placed to pass on raw material price fluctuations and foreign exchange volatility to their clients. On the other hand, chemicals traders often have quite low equity and tighter liquidity, as they are affected more by exchange rate fluctuations.

In December 2013 the Mexican Congress approved an energy reform bill that will allow the state-owned petroleum company Pemex to transfer strategic activities such as exploration, production and refining of hydrocarbons through profit-sharing and production-sharing contracts to the private sector. This should prove attractive, in the medium term, to private companies and enable Pemex to speed up medium-term offshore deep water development and other unconventional oil reserves which it does not currently have the technology to develop.

On average, payments in the Mexican chemicals industry take 60 to 90 days. Our portfolio payment experience over the past two years has been good, and we do not expect payment defaults to increase in 2014.

Our underwriting stance for the chemicals sector remains generally relaxed. To assess credit limit applications accurately in this sector, we need to obtain accurate financial information and, if possible, audited financials. We also evaluate the experience of the buyer company in the market, its clients base, and any special project or tender in which the buyer might be involved. We seek our customer's trading experience with the buyer to evaluate the buyer's payment record and whether the limit is needed to cover spot orders or revolving business. We also take into account the financial and market strength of our customers.

We encourage our customers to allow us to mention their names when contacting buyers in order to get financial information. In some subsectors, such as agrochemicals and fertilizers, it is helpful to speak directly to buyers to clarify the harvest and collecting cycles of their products as this will help assess their financial situation.

In the plastic subsector, several buyers also sell to the informal economy (street markets) and their actual financial situation may differ radically from the official figures provided.

We recommend that our customers obtain payment guarantees such as Promissory Notes (Pagaré): a commonly used document in Mexico that is very useful for collection procedures, since it has legal status and is recognised by the Mexican courts. In turn, this allows us to increase our risk appetite.

Mexican chemicals sector

STRENGTHS	WEAKNESSES
Performance has improved due to the rebound in the US economy.	Shortages and inefficient supply of energy provided by Mexico's state-owned company Pemex
A dynamic sector with a positive outlook in the medium term due to the recent energy reforms approved by the Mexican Congress	The sector may be affected by the volatility of raw material prices and foreign exchange rates
A few big players with low risk profile in strategic hydrocarbons and petrochemical areas with the support of the Mexican government	

Spain

- **Strong export performance for chemicals**
- **Pharmaceuticals subsector still suffering**
- **Improving payment behaviour and fewer insolvencies**

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

According to Feique (the Business Federation of the Spanish Chemical Industry), in 2013 the Spanish chemicals sector recorded moderate turnover growth of 1.4%, and is forecast to grow 3.5% , to EUR 57.845 million, in 2014. This figure will exceed 54% of the revenue achieved in 2000. But with domestic demand still subdued, the key to growth is export performance. Considerable internationalisation in the Spanish chemicals industry and its ability to access foreign markets is expected to lead to a 5.8% increase in exports in 2014, after growth of 4.9% in 2013. However, businesses are operating with very tight margins on their foreign sales as a result of high prices for raw materials and growing global competition.

In contrast to chemicals, the pharmaceuticals subsector is still troubled. According to Farmaindustria (the Spanish pharmaceuticals trade association), the accumulated public pharmaceuticals expenditure in 2013 was EUR 588 million lower than in 2012: a 6% decrease. 2013 was the fourth consecutive year of reduction in public pharmaceutical expenditure for National Health Service prescriptions. In the period 2009-2013 public expenditure on pharmaceuticals fell by 27%. The demand side of prescriptions decreased 8%, and the average expenditure per prescription by 20%. The pharmaceuticals sector still suffers from severe payment delays by public bodies and from the National Health Service's efforts to rationalise medicine consumption.

Payment behaviour in the chemicals industry depends on company size, sector activity and even the company's location. On average, payments in the industry take around 60 days: better than most Spanish industries overall, where over 50% of companies take more than 75 days to pay.

We have seen no increase in notifications of non-payment and subsequent credit insurance claims in 2013 and in Q1 of 2014. Indeed, in all chemicals subsectors the payment behaviour is improving. The claims trend in the chemicals industry is better than the Spanish industry average and we expect insolvencies to decrease in 2014. Because of its high degree of internationalisation, the industry is less dependent on the domestic market, and therefore our underwriting approach to the sector has relaxed. However, we are still more cautious about poorly rated buyers and those that cannot provide up-to-date financial information or trading experience.

Even in the case of the most troubled subsectors – for example pharmaceuticals and fuel – we have made every effort to optimize our exposure, seeking the most recent financial information, and good interim figures, enabling us to maintain or even increase our credit approval.

Spanish chemicals sector

STRENGTHS	WEAKNESSES
High degree of internationalisation and an ability to access foreign markets	The negative inertia in domestic demand
Large investment in research, development and innovation (R&D)	Low margins, dependence on oil and raw material prices
Modern and well-structured industry with several profitable subsectors	Major and growing number of competitors
Product diversification	Low level of financing support of these businesses

USA

- **Solid growth rates expected in 2014 and 2015**
- **Capital spending continues to increase**
- **Insolvencies expected to decrease 5% in 2014**

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

US chemicals are used in the production of 96% of manufactured goods, making the manufacturing industry the biggest consumer of chemical products. After increasing 2.9% in 2013, US industrial production is forecast to increase 3.9% in 2014 and 3.6% in 2015. Growth in the chemicals sector typically follows GDP expansion or contraction and therefore, as the economy improves, so will the chemicals sector. Forecasters expect the US economy to grow 2.5% in 2014 and 3.1% in 2015 following 1.9% growth in 2013. The modest recovery in Europe and continued growth in the emerging markets also support the stable outlook for US chemicals companies.

According to the American Chemistry Council (ACC), US chemicals output increased 1.6% in 2013, while expectations are for a 2.5% rise in production in 2014 and 3.5% in 2015 (see chart below) Trade in the chemicals sector expands as global manufacturing improves and, in the long term, the US chemical industry is expected to grow faster than the overall US economy. The development of shale gas and the surge of liquefied natural gas (LNG) supply has moved the US chemicals sector from being a high-cost producer to one of the world's lowest-cost producers, resulting in increased export demand and new capital investment.

U.S. Chemistry Outlook: Production Volumes

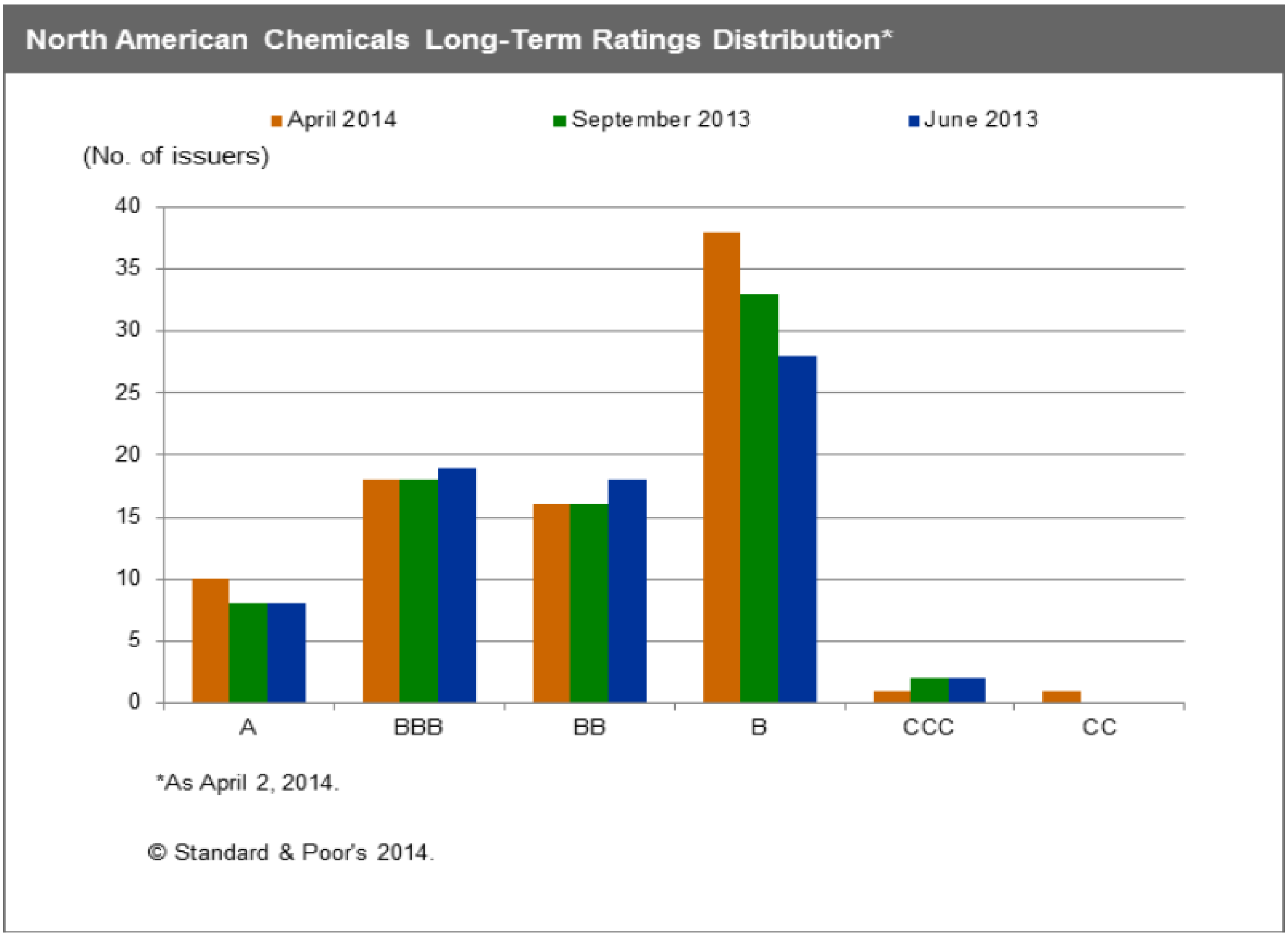
% Change Year-over-Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average 2019-23
Total Chemicals Production Volume	3.3	0.0	0.1	1.6	2.5	3.5	4.0	4.1	4.0	3.4
Production Volume by Segment										
Pharmaceuticals	-6.9	1.6	-3.2	-0.7	2.3	3.5	4.3	4.4	4.6	4.2
Chemicals, excl. Pharmaceuticals	10.0	-0.9	2.1	3.2	2.6	3.5	3.8	4.0	3.6	2.9
Consumer Products	1.5	5.1	5.2	5.5	2.0	2.2	2.3	2.3	2.2	2.3
Agricultural Chemicals	4.3	-5.9	-3.2	2.3	1.4	1.9	3.7	4.8	3.0	1.3
Fertilizers	12.2	-12.0	-9.5	2.0	1.4	2.2	4.9	5.9	3.8	1.8
Crop Protection	-4.9	6.1	11.5	2.5	1.4	1.7	2.9	3.9	2.4	1.0
Specialties	10.4	-1.3	6.9	4.8	3.2	3.6	3.5	3.0	2.9	2.7
Coatings	9.9	0.4	9.0	7.2	3.3	3.3	3.6	3.2	3.2	3.3
Other Specialties	10.6	-1.9	6.0	3.8	3.2	3.7	3.4	3.0	2.7	2.5
Basic Chemicals	16.2	-2.3	0.6	1.2	2.4	4.2	4.5	4.4	3.9	3.1
Inorganic Chemicals	11.7	-3.0	4.7	-0.8	1.2	4.2	4.5	3.3	2.3	2.0
Bulk Petrochemicals & Organics	18.8	-1.2	-1.6	1.6	2.9	4.5	4.6	5.0	4.9	3.6
Plastic Resins	14.3	-6.1	1.6	2.5	2.7	4.2	4.7	4.8	4.0	3.4
Synthetic Rubber	14.5	4.6	7.1	1.3	2.6	4.2	4.2	3.6	3.4	2.7
Man-Made Fibers	33.6	5.2	4.3	0.7	0.1	0.4	0.1	0.9	1.6	0.0
Production Volume by Region										
Gulf Coast	13.5	-2.1	0.7	1.4	2.3	4.0	4.3	4.2	3.9	2.9
Midwest	2.0	0.1	-0.2	1.4	2.4	3.5	4.0	4.0	3.9	3.4
Ohio Valley	9.8	-0.9	2.3	3.0	2.3	3.4	3.7	3.7	3.8	2.8
Mid-Atlantic	-1.1	0.9	-0.9	1.0	2.3	3.4	4.0	4.0	4.1	3.6
Southeast	2.4	-0.2	-0.1	1.6	2.2	3.3	3.9	4.0	3.7	3.1
Northeast	-1.9	1.4	0.0	1.4	2.4	3.3	3.8	3.8	3.8	3.4
West Coast	-2.2	1.0	-1.2	1.0	2.3	3.4	4.0	4.0	4.0	3.6

Source: American Chemistry Council

The ACC expects to see above-trend growth in basic chemicals over the forecast horizon. Innovation will continue to drive the chemicals sector with growing investments in research and development. It is expected that many US businesses in the petrochemicals, refining, and fertilizer subsectors will continue to show favourable performance in 2014. These industries benefit from the low-cost of ethylene and ammonia, and the rise in natural gas prices is not expected to hurt the US petrochemicals and downstream sectors. Instead, they should benefit from a favourable cost position compared to international competition. Chemical businesses related to US housing and global automotive markets are expected to see increasing demand. Growth is also expected in the weaker end markets, electronics and solar, as they typically lag.

After surging in 2011 and 2012, capital spending in the US chemicals sector increased again in 2013, by 10% to US$ 42.4 billion. Forecasts are for capital spending to increase 8% on average per year until 2016 and to reach US$ 61.2 billion by 2018: more than double the level of spending in 2010. The increase in capital investment is due primarily to the shale gas boom that has improved the position of US chemicals companies on the global cost curve. According to the US Government Energy Information Administration, the US ranks second for countries with recoverable shale oil resources, with Russia ranking first and China ranking third. The US is estimated to have 58 billion barrels (Russia: 75 billion barrels; China: 32 billion barrels).

The credit quality of US chemicals companies should remain generally stable in 2014, with improving macroeconomic conditions and growth leading to a gradual decline in leverage. The industry as a whole benefits from lower operating costs resulting from cost restructuring, generally high cash balances, and improved debt maturities profiles compared to a few years ago. 87% of companies rated within the US chemicals sector have stable outlooks from Standard & Poor's with a median rating of 'BB' (see chart below).



Source: Standard & Poor's

The credit quality of major chemical buyers remains strong, despite the struggles to improve top line sales organically. In the US, many companies in this industry have large cash balances and solid financial profiles, therefore, M&A activity is expected to continue. Coatings, industrial gases, chemical distribution, and other fragmented chemical subsectors are the most likely consolidation candiates in 2014.

Payment experience throughout the chemicals industry has improved over recent years. On average, payments in the chemicals industry take between 30 and 90 days, with payment delays - and credit insurance claims filed with Atradius - decreasing continuously since 2008: a particularly bad year for the industry. We expect fairly steady performance in 2014.

Insolvencies in the chemicals industry are expected to decrease at a similar rate as the business insolvency rate of the US, i.e. by 5%.

As in 2013, our underwriting approach to this sector remains generally positive, in view of the credit quality of the industry leaders and their ability to withstand global recessions due to their large cash balances and strong balance sheets. As the sector is highly fragmented, we scrutinise single subsector trends and end-markets. Access to financial information is difficult, but is essential when considering large deals. We continue to review distressed risks on a quarterly or bi-annual basis and use both third party credit agency information and confidential credit sources to support our assessment of the appropriate level of cover. We continue to discuss and meet with industry experts and decision makers to maximize the cover that we can offer.

US chemicals/pharmaceuticals sector

STRENGTHS	WEAKNESSES
Pricing has stabilised as raw material costs are down, enabling margins and profits to be maintained	Slowdown of demand from Latin America
Asia and Europe are driving the growth in the industry	Difficult end markets such as electronics and solar can cause consolidated earnings to fluctuate
Mergers and acquisitions are likely to grow in the current economic environment	
Corporate profits and capital investments are rising and production is showing continued single digit gains	

Germany

- **Solid growth continues in 2014**
- **Stable payment record**
- **Insolvencies continue to decrease**

The German chemicals and pharmaceuticals sectors will continue to grow. According to the German chemicals association VCI, German chemicals/pharmaceuticals production will increase 2.0% in 2014 (after increasing 1.5% in 2013), while turnover is expected to rise 1.5%, to EUR 193.5 billion (after rising 1.0% in 2013). German chemicals/pharmaceuticals businesses generally have a strong market position, and many are highly specialised. In addition, the industry's considerable investment in research and development has given it a well-deserved reputation for innovation and a consequent competitive edge.

Generally, German chemicals and pharmaceuticals businesses have robust equity, solvency and liquidity. Profit margins in the chemicals sector are stable overall, although they are influenced by global oil prices. Profit margins in the pharmaceuticals sector are still satisfactory but are shrinking in the domestic market because of the health regulations introduced in 2010. In 2013 a number of patents expired leading to a decline in both turnover and profits from these products. However, pharmaceutical research based manufacturers compensated for this with intensified research and mergers and acquisitions.

The German chemicals and pharmaceuticals sector's payment behaviour has always been better than average with no notable payment delays, even at the height of the 2008/2009 economic crisis. In our experience payments take, on average, 45 days – even fewer for domestic payments, as most chemicals and pharmaceutical products are exported to destinations with longer payment terms than the domestic market. We have seen no change in payment behaviour or increase in notifications of non-payment in the last six months and expect this pattern to continue in the coming months. This should be accompanied by fewer insolvencies in the sector: both chemicals and pharmaceuticals have a lower insolvency rate than other German industries and indeed, after a 7% year-on-year decrease in 2013, we expect German business insolvencies to decrease further this year: by 2%.

Our underwriting stance for this sector remains generally relaxed, with normal external monitoring and buyer reviews. However, we pay additional attention to buyers that depend on more critical sectors, such as photovoltaic which has been affected by insolvencies and restructuring because of reduced public subsidies and strong competition from China.

The Netherlands

- **Lower investments due to global competition**
- **Still a strong position in Europe**
- **No increase in payment delays and insolvencies**

In 2013 the Dutch chemicals industry was hampered by both continuing difficult economic circumstances in Europe and its increasingly weak global competitive position. Due to a steep dip in orders, chemicals sales and production fell in the period from January to September 2013, by 6% and 5.5% year-on-year respectively, while prices decreased 2%. Exports, accounting for 80% of total production, fell by more than 2%, while capacity utilisation in Q3 of 2013 was 1.5% lower than in the same period of 2012.

However, in Q1 of 2014 the turnover of chemicals companies increased by more than 3% year-on-year while production increased by nearly 7%, and growth in sales and turnover is expected to continue throughout the year. Production levels are now higher than they were before the 2008 financial crisis although, as prices for chemicals have fallen by almost 4%, margins are under pressure. At 82%, the capacity rate is back to pre-crisis levels, but this has so far not resulted in new investment. Oil prices have been relatively stable in the last three years, limiting purchasing risks. However, as a result of lower energy prices elsewhere, large investments are being postponed or transferred to countries outside Europe. Lower energy and commodity prices in the US (where cheap shale gas and cheaper oil result in much lower production costs) and big chemicals investments in the Middle East pose a competitive disadvantage for Dutch chemicals businesses, putting pressure on their profit margins.

Nevertheless, despite a weakened global position, the Dutch chemicals industry still has a strong position in Europe, where it profits from its geographical position and the strong chemical clusters. The chemicals industry in the Netherlands forms part of one of the strongest chemical clusters in the world: the interconnected Antwerp-Rotterdam-Rhine-Ruhr Area (ARRRA). In particular, the strong clusters in Rotterdam and Limburg have ensured that basic chemicals production has increased 40% over the past ten years.

We have seen no increase in payment delays in the Dutch chemicals/pharmaceuticals sector over the past six months, nor do we expect any change in the coming months. The same is true of insolvencies, which are below the average for Dutch industries. Despite the current and expected future difficulties for the Dutch chemicals sector, as global competition grows, at present we see no reason to tighten our underwriting policy for the chemicals/pharmaceuticals sector. We monitor developments by seeking the most recent financial information from buyers and asking our customers to notify us of their trading experience, orders on hand and outstanding payments.

Disclaimer

Crédito y Caución
Paseo de la Castellana, 4
28046 Madrid
Spain

www.creditoycaucion.es