

## Trade Secrets – Facts & Figures on the Chemical Industry in Europe

14 March 2013

### A. Industry Fundamentals<sup>1</sup>

- The European Union is a leading exporter and importer of chemicals in the world accounting for 40% of global trade in 2011. EU chemical sales were valued at €539 billion in 2011 with a record trade surplus of €37 billion.
- The EU chemicals industry accounts for €31.5 billion in investment and an average annual level of €7.7 billion in Research & Development (R&D) spending. The industry is the key to providing sustainable solutions to today's economic and environmental challenges.
- In 2011, the chemical industry was the third EU largest manufacturing sector in terms of added value. Chemical companies in the EU employ about 1.16 million total staff through direct employment and generate about twice as many indirect jobs via the value chain.
- The main sectors of the EU chemical Industry are base chemicals (petrochemicals, basic inorganics and polymers sold to industries), specialty chemicals (auxiliaries for industry, paints & inks, crop protection, and dyes & pigments) and consumer chemicals (soaps, detergents, perfumes and cosmetics).
- As one of the largest and most diversified industries globally, the EU chemical industry supplies virtually all sectors of the economy and plays a central role in providing all manufacturing sectors as well as construction, health and agricultural sectors with essential products and services.
- In 2011, SMEs make up 96% of EU chemical companies and are responsible for 28% of all sales and 35% of all employment.

### B. Importance of Trade Secrets for chemical companies

Trade secrets or Confidential Business Information (CBI) often represent a substantial portion of a company's value and performance, and are essential to its growth, competitive advantage and sometimes even its survival. Trade secrets or CBI are valuable business assets as they confer competitive differentiation and advantages over competitors through a particularly innovative step or through a combination of incremental advances including on the EU market.

The importance of trade secrets or CBI to European industry's competitiveness is increasingly recognized. At the same time, there is growing concern that the EU and its Member States have not been doing enough in particular to protect against their misappropriation and theft.

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<sup>1</sup> Data sourced from Eurostat and CEFIC statistics.

Contrary to common belief, trade secrets or CBI are not limited to technical items and innovative know-how but includes also information which provides an enterprise with a competitive edge such as sales and distribution methods. For more details about the importance of secrets and illustration on how they are used, please see Cefic recent Report available on its web site at the following address: <http://www.cefic.org/Documents/PolicyCentre/Cefic-Report-on-the-Importance-of-Trade-Secrets-for-Chemical-Companies.pdf>

### C. Vulnerability of the companies' Trade Secrets

Cefic interviewed some of its company members, including SMEs, to ask them to evaluate the vulnerability of their competitiveness in case of misappropriation or theft of trade secrets or CBI.

#### Up to 30% of potential loss of turnover was often mentioned.

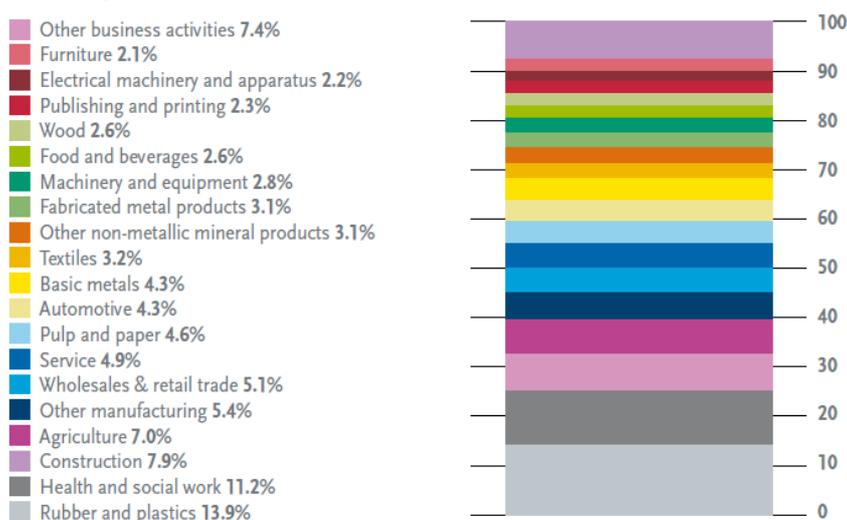
This percentage could reach up to 80-100% when trade secrets or CBI are the foundation of the product differentiation or the manufacturing process. For these businesses, a theft of key aspect of their trade secrets or CBI could have a significant impact on their future, especially if the stolen trade secrets end up in the hands of a competitor or of a potential new market entrant who would thereby gain an unfair advantage by not having to invest the time and money to develop such knowledge. This could, also within a matter of years, lead to major restructuring including plant shut downs and delocalisation to lower cost countries if differentiation or process/productivity advantage is lost and it becomes all about manufacturing costs only.

This means that without an enhanced protection against misappropriation or theft, some of the most developed and mature markets are at risk and companies R&D spending and jobs may be lost in the European Union.

### D. Facts & figures

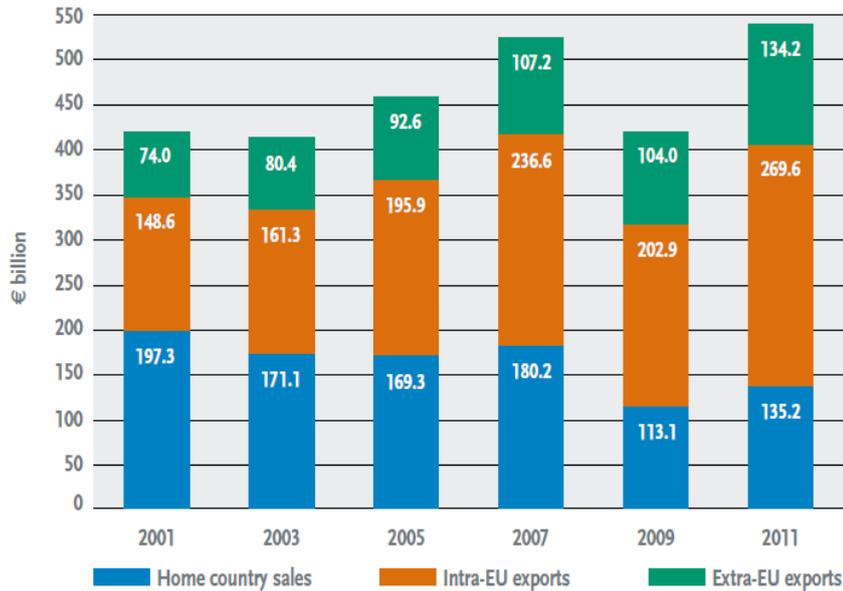
#### The EU chemicals industry supplies virtually all sectors of the economy

Customer sectors of the EU chemicals industry  
Percentage of output consumed by customer sector



Sources: European Commission, Eurostat data (Input-Output 2000) and Cefic Analysis

## EU internal market drives intra-EU chemicals trade



Source: Cefic Chemdata International

Between 2001 and 2011, the European internal market had a profoundly positive effect on the chemical industry. Removing both trade and non-trade barriers inside the EU area has been a key driver for growth and competitiveness of the chemical companies in the EU.

The internal market, today numbering more than 500 million consumers, is a key competitiveness factor. With the accession of new Member States in 2004 and 2007, the internal market has received an intra-trade boost.

Total EU chemicals sales were valued at €539 billion in 2011. Intra-sales (marked “intra EU exports” in graph) have climbed from €148.6 billion in 2001 to €296.6 billion in 2011 – an increase of 81.4% during the 10 year span.

However, more can be done. Divergence in trade secrets laws in various Member States and the effective enforcement lead to barriers in cross-border activities in the internal market. This issue is particularly essential to the European chemical industry which is driven by intra-EU trade that accounted for half of its trade in 2011.

The European Union contribution to world chemicals sales declined in 2011 by 10.2% compared with 2001 as shown here below. In fact, the total value of sales in the EU has been growing continuously, but overall world chemicals sales are growing at an even faster clip. The level of world chemicals sales in value terms increased by 95% in 2011 compared with 2001.

Developments during the years from 2001 to 2011 indicate that the European Union was the overall leader in terms of world chemicals sales, but the region has gradually lost ground to China and Asia (excluding Japan).

**World chemicals sales per region – Emerging economies outpace industrial countries in chemicals production**



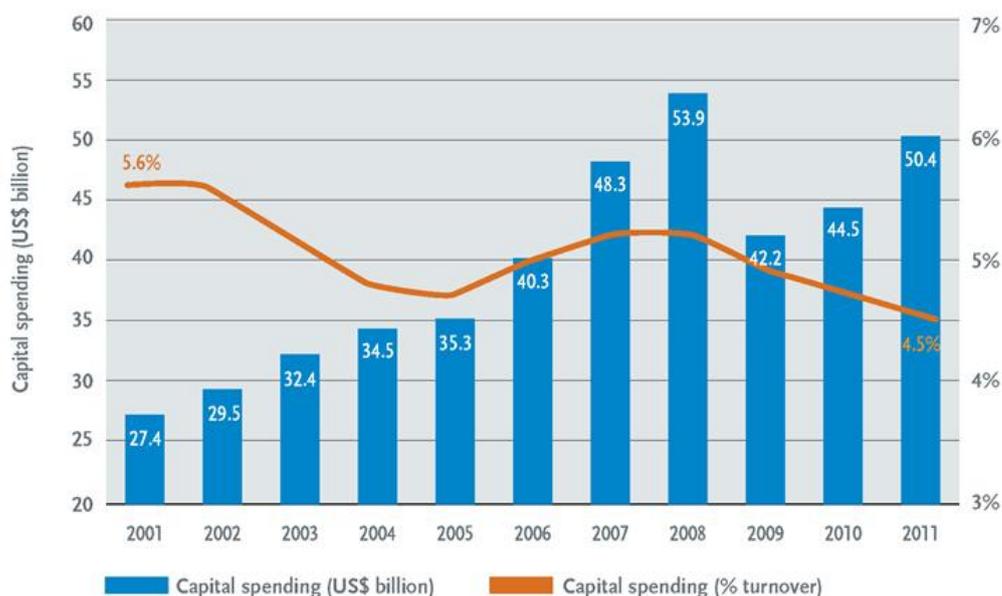
Source: Cefic Chemdata International, \*Asia excluding China and Japan

Investments in innovation, including R&D are key elements in securing the future of the chemical industry. They not only promote the adaptation to the development of new technologies and innovation, but are necessary prerequisites for the continuous adjustment of corporate structures to the needs of the marketplace.

In absolute figures, investment in Western Europe had been increasing from 2001 to 2008, registering a positive trend at a consistent pace. Investment during 2009, however, experienced a steep decline compared to 2008, down by 21.6%. Investment did recover in 2010, however, up by 5.5% compared with 2009. The sector in 2011 registered a significant increase in investment , a 13.1% climb compared with 2010.

In relative terms, the ratio of capital spending to sales, or capital intensity, of the Western European chemical industry has been declining and reached the value of 4.5% in 2011, down from 5.6% registered in 2001.

### Investment and R&D capital spending in Western Europe



Sources: American Chemistry Council (ACC) and Cefic Analysis (Including pharmaceuticals)  
 \* Western Europe covers the first 15 members states of the European Union, plus Norway and Switzerland  
 Unless specified, chemicals industry excludes pharmaceuticals  
 Unless specified, EU refers to EU-27

## R&D spending intensity in the EU chemicals industry



Sources: OECD database and Cefic Chemdata International

Unless specified, chemicals industry excludes pharmaceuticals

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In absolute figures, R&D spending in the chemical industry was valued at an average annual level of €7.7 billion in the EU during the period from 1991 to 2009.

In relative terms, the ratio of R&D spending to sales, or R&D intensity, of the European chemical industry has been declining and reached the value of 1.8% in 2011, down from 2.8% registered in 1991.

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