

## AUTOMOTIVE AND AUTOMOTIVE COMPONENTS INDUSTRY

*As a consequence of the quality improvements over the last decade, Turkey is one of the strongest candidates together with Eastern European countries to become a production base for a number of global models.*

### Sector Overview

Turkey is the 6<sup>th</sup> largest vehicle producer in Europe with its production of 850,000 units. It is expected to rank higher as global suppliers increasingly focus on Turkey as a production and export base for their global models. In that respect, Turkey's major competitors are Eastern European countries such as the Czech Republic, Hungary and Poland. It is forecasted that a total 2.3 million vehicles will be produced in this region in 2006, increasing to 3.8 million by 2010. In December 2004, Diego Avesani, the chief executive of Tofas, said that production costs at Tofas are around half those in Italy, partly due to considerably lower labor costs. In addition to global models, plants were also transferred to Turkey, including the Ford plant in the U.K. The Turkish automotive industry exported vehicles worth \$12.8 billion in 2005, with a 20% increase over 2004.

<b>LABOR COSTS IN AUTOMOTIVE , 2004</b>	
<b>Country</b>	<b>Cost per Hour, \$</b>
Western Europe	25.00
U.S.A.	20.00
South Korea	12.00
Turkey	8.00
Eastern Europe	6.00
India	1.50
China	1.00

*Source: Robert Werner, Columbia Business School*

Investments in the automotive sector have grown steadily since the Customs Union with the EU in 1996, and forces driving the market have significantly changed the characteristics of the industry since then:

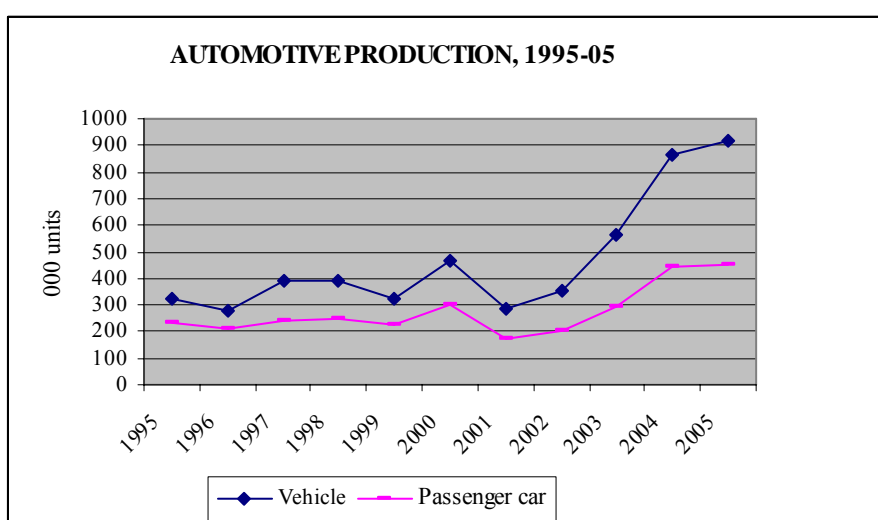
- Competitiveness at the domestic level has been replaced with competitiveness on a global scale. The automotive industry, which was originally founded for import-substitution purposes and focused on the domestic market for a long period, transformed itself into a production base for a number of global models. Total investment amount, which was \$220 million in 1996, increased to over \$400 million in 2000 and, despite the serious economic crisis of 2001, maintained its level since then. New investments are expected to come along with the sector's impressive growth in 2004 and 2005. According to the Automotive Manufacturers' Association, investment requirement of the sector in the next five years is around \$5 billion.
- The market was opened to direct competition from the EU as a result of the Customs Union concluded in 1996. The share of imported vehicles in domestic sales soared from 14% in 1995 to 48% in 2002, 56% in 2003 and 57% in 2005.

### DEVELOPMENT OF VEHICLE IMPORTS, 1995-05

000 Units							
	1995	2000	2001	2002	2003	2004	2005
Domestic Sales	280	659	195	175	400	745	763
Imports	39	342	94	83	223	432	438
Share of Imports, %	14	52	48	48	56	58	57

*Source: AMA (Automotive Manufacturers' Association)*

- Production pattern has been stabilized, being less subject to fluctuations in production resulting from economic crises. With the exception of the August 1999 earthquake and the 2001 economic crisis, production steadily increased from 391,000 in 1997 to 562,466 in 2003 and 862,035 in 2004 – a stable pattern compared with the pre-1996 period.



- The industry became a net exporter, meeting the quality standards of customers worldwide due to quality improvement over the last decade. The share of exports in total production increased from 11% in 1995 to 73% in 2002, but declined to 61% in 2005 due to developing domestic demand.

DEVELOPMENT OF VEHICLE EXPORTS, 1995-05							
000 Units							
	1995	2000	2001	2002	2003	2004	2005
Production	319	468	285	356	562	862	914
Exports	36	105	202	262	360	518	561
Share of Exports, %	11	22	71	73	64	60	61

*Source: AMA (Automotive Manufacturers Association)*

The main strengths of the sector include:

- ✓ Existence of capacity suitable for the economies of scale
- ✓ Strong auto parts industry with a diversified product portfolio

- ✓ Strong cooperation with foreign partners and development in R&D capacity
- ✓ Growth potential in the domestic market
- ✓ Proximity to developing and developed markets
- ✓ Alignment with international technical legislation and quality system and perspective for EU accession
- ✓ Qualified and relatively cheap labour.

In motor vehicles, a large number of EU legislation was adopted. Turkey has been continuing efforts to introduce the relevant legal arrangements, and significant progress has been achieved in this field.

### **Market Size**

The automotive sector experienced a record-breaking year in 2005 with a demand of 763,186 units, mainly pushed by a surge in imports. Imports accounted for over half of the total demand for the first time in 2000 with 52% and became 57% in 2005.

Turkish automotive production dates back to the mid-1950s and the industry gained momentum in the 1960s. The first vehicle assembly company was established in 1954 for jeep and pick-ups. Production of trucks started in 1955 and of buses in 1963. The two major producers of cars, Tofas and Oyak Renault, under Italian and French licenses respectively, established their production lines in 1971. Recently, Japanese and South Korean car manufacturers have established joint-ventures in Turkey. Nearly all international brands are represented in the Turkish market. Those companies with local operations, e.g. Ford, Hyundai, Renault, Mercedes-Benz Turk and Fiat also import some of their international models.

The sector is one of Turkey's major production and export forces. Production began to increase rapidly in 1990s to meet the growing domestic and export demand. While 68,000 total vehicles were produced in 1980, this jumped seven fold to more than 468,000 in two decades. Total vehicle production increased to 862,035 units in 2004 and 914,359 units in 2005, growing 57% and 6%, respectively compared with the previous year.

In 1999, the global crises and the Marmara earthquake negatively affected the automotive industry. As a result of the high interest rate, domestic demand for those products took a dive and production decreased. In 2000, the macroeconomic program implemented in Turkey resulted in considerable demand increase for automotive products. Nevertheless, due to the two consecutive crises in November 2000 and in February 2001, interest rates went up, floating currency system was introduced and the Turkish Lira devaluated. This created uncertainty in the economy, decreased domestic demand and negatively affected all industrial sectors, especially automotive industry. The contraction in automotive sector continued up to September 2002, when recovery started. In 2003 and 2004, the sector performed well due to the positive developments in the economy and the increase in domestic demand.

<b>THE VEHICLE MARKET, 1990-05</b>								
<b>000 units</b>								
	<b>1990</b>	<b>1998</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Sales</b>	285	477	658	195	174	400	745	763
<b>Production</b>	209	344	430	270	346	533	823	879
<b>Imports</b>	82	179	339	94	82	223	432	438
<b>Exports</b>	6	37	96	198	258	348	508	552

Note: Farm tractors excluded

Source: SPO, AMA (Automotive Manufacturers Association)

Major companies comprise 15 assemblers of which 10 are foreign owned or joint ventures operating under licenses. There are no public enterprises in the sector.

In recent years, passenger car production accounted for between 50-60 % of total motor vehicles production in units. In 2005, 454,000 passenger cars, 463,000 trucks and pick-ups and 35,000 farm tractors were produced.

<b>TOTAL VEHICLE PRODUCTION BY TYPE, 1995-05</b>									
<b>'000 Units</b>									
<b>Types</b>	<b>1995</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Passenger Car</b>	<b>233</b>	<b>240</b>	<b>222</b>	<b>297</b>	<b>175</b>	<b>204</b>	<b>294</b>	<b>447</b>	<b>454</b>
<b>CV</b>	<b>49</b>	<b>104</b>	<b>76</b>	<b>134</b>	<b>96</b>	<b>142</b>	<b>239</b>	<b>377</b>	<b>426</b>
Truck	19	31	13	28	7	12	19	32	37
Pick-Up	17	46	38	69	77	117	195	302	350
Bus	1	3	2	4	3	3	4	5	5
Mini-bus	8	14	13	21	6	6	14	28	26
Midi-bus	4	10	10	12	3	4	7	10	7
<b>Farm Tractor</b>	<b>44</b>	<b>49</b>	<b>27</b>	<b>37</b>	<b>15</b>	<b>11</b>	<b>29</b>	<b>39</b>	<b>35</b>
<i>Total</i>	326	393	325	468	286	357	562	862	914

Source: AMA (Automotive Manufacturers Association)

## Foreign Trade

In 2005, the automotive sector imported 438,114 units and exported 561,078 units. Although imports fluctuated over the years, exports showed a steady growth from 35,000 units in 1995 to 359,685 units in 2003 and over 500,000 units in 2004.

The automotive is the third biggest exporting sector after textiles and iron & steel with \$4.1, \$6.9 and \$8.0 billion in 2003, 2004 and 2005, respectively. The 2005 exports represented doubling of the 2003 figure of \$4.1 billion. Exports began to increase sharply in 1999, accounting 61% of total passenger vehicle production in 2005. Total passenger car exports were 142,288 in 2001 and 169,920 in 2002. It rose to 305,072 in 2004 and 319,825 in 2005. During the same period of 2001-2005, exports of commercial vehicles increased from 56,260 units to 233,013 units.

<b>AUTOMOTIVE EXPORTS, 2001-05</b>					
<b>000 units</b>					
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Passenger car	142	170	214	305	320
Commercial vehicle	56	88	134	203	233
<i>Motor vehicles</i>	<i>198</i>	<i>258</i>	<i>348</i>	<i>508</i>	<i>553</i>
Farm tractors	4	4	12	10	8
<i>General total</i>	<i>202</i>	<i>262</i>	<i>360</i>	<i>518</i>	<i>561</i>

*Source: AMA ((Automotive Manufacturers Association)*

The sharp rise in demand in the early 1990s also led to an increase in imports. In 2005, total imports amounted to 438,114 units, meeting 57% of the domestic demand. Over 75 % of imported cars came from EU and EFTA countries.

### **Automotive Components Industry**

The automotive parts industry is strong and competitive. It has developed in parallel with the development of Turkey's automotive industry both in quality and production volumes. Turkish auto parts manufacturers are the pioneers of Turkish companies for the European Quality Award. Brisa was the first winner of this award in 1996 and Beksa the second in 1997. In 2002, Bosch was rewarded by European Foundation for Quality Management with a prize in the operational units category.

The industry is capable of meeting 80% of the needs of local vehicle producers, of supplying the after-sales requirements of the Turkish car park, and of exporting to major European producers. Exports of automotive components are shipped to 170 countries, with 70 % of the total going to the EU. Due to the high export potential and regional advantages of Turkey, foreign capital is showing an increasing interest in the automotive components industry. Currently there are 185 foreign partnerships in the industry, most of which are with European Union companies.

The sector has a diversified product range, comprising of casting, forging, engine, power-train parts and components, electrical equipment, brake and clutch parts, hydraulic and pneumatic systems, body panels, chassis frame and parts, seating and safety components, suspension systems, fixings, various plastics and aluminium parts, batteries and auto glasses. About 700 suppliers operate in various branches of activity. Of these around 300 are large-scale companies producing for OEM.

The value of production and exports of automotive components has been increasing steadily. Production of automotive components jumped from \$3.1 billion in 2002 to \$5.3 billion in 2004, while exports rose from \$1.9 billion to \$3.0 billion.

<b>AUTOMOTIVE COMPONENTS DEMAND, 2002-2005</b>			
<b>\$ Million</b>			
	<b>2002</b>	<b>2003</b>	<b>20042005</b>
Demand	3,721	5,871	8,864n.a.
Production	3,167	4,280	5,300n.a.
Imports	2,456	3,994	6,6417,520
Exports	1,902	2,403	3,0773,715

*Source: Association of Automotive Parts & Components Manufacturers*

Exports of automotive components are shipped to 170 countries, with 70 % of the total going to the EU. Germany, Italy, France and UK are major destinations with a share of 55%. Due to the high export potential and regional advantages of Turkey, foreign capital is now showing an increasing interest in the automotive components industry. Currently there are 185 foreign partnerships in the industry, most of which are with European Union companies.

<b>EXPORTS OF AUTOMOTIVE PARTS AND COMPONENTS, 2002-05</b>				
<b>\$ million</b>				
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Parts & Accessories	1,501	1,860	2,446	2,958
Tyres	362	472	546	640
Batteries	26	52	57	66
Safety glasses	12	19	28	51
<i>Total</i>	<i>1,902</i>	<i>2,403</i>	<i>3,077</i>	<i>3,715</i>

*Source:* Union of Uludag Exporters' Association

### **Prospects**

- Despite increasing exports, domestic demand is crucial for the future of the automotive sector. Turkey has been improving its macro economic indicators in the last four years – with rising income levels (\$7,503 in 2004 on PPP basis), declining interest rates and increasing consumer confidence. Car ownership levels are low and there is a high potential demand for automotive products.

<b>AUTOMOTIVE PENETRATION RATES, 2000</b>		
	<b>Turkey</b>	<b>EU</b>
Vehicles/1,000 persons	91	556
Passenger cars/ 1,000 persons	67	476

*Source:* Ministry of Transportation

- The industry has a significant export potential as well, since Turkey is expected to become a production and export base of the automotive industry, mainly for the EU market in the long term. The high quality level of the industry in terms of production technology, innovation capacity and human resources is appreciated worldwide. Geographical position and logistic opportunities also make Turkey an attractive location for automotive investments. Turkish companies are aware of the importance of these factors for global competition. The level of integration with the EU on legislation is very promising in the automotive sector. The Turkish regulatory system is considerably harmonised with the EU legislation (in terms of fair competition, consumers, patents, machinery directives etc.). The adopted legislation is also in line with international rules of free trade within the context of the Customs Union and WTO (World Trade Organisation). In order to maintain its export-oriented competitiveness, the country needs to develop a structure that will allow economies of scale and implementation of new technologies and designs.

- Parallel with the developments in the automotive industry, the components industry expects a bright picture in the medium term. Due to the high export potential and the regional advantages, the sector remains attractive for foreign investors. Turkey is the 6th biggest automotive producer in Europe with its production of 850.000 units and is expected to rank higher as global suppliers choose Turkey as a production and export base. Its high export potential and logistic advantages mean the auto parts sector remains attractive to foreign investors, particularly in areas of R&D and design geared to joint production and exporting. Such investors can assure the sector maintains its competitiveness, develops economies of scale and implements new technologies and designs
- The gradual replacement of mechanical components by electronic components is leading to growth in use of electronics for stability control, power steering, body controllers and navigation. The share of electronic components is expected to increase from the current 25% to 40% in five years. The industry trend is towards supplying integrated systems and modules, and further consolidation and globalisation are expected.

#### **AN INDUSTRY WITH EXPORTS WORTH \$3.7 BILLION**

The automotive parts and components industry is at a level ready to take advantage of the globalization and structural changes in the world automotive industry. A number of firms active in the industry have reached the stage where they act as “co-designer” for the global production of motor vehicle manufacturers. Turkish OEMs and component manufacturers could keep their competitive status relatively well mainly due to the increased operational efficiency and lower interest rates. Over 100 major component manufacturers from Europe and other countries have close ties with Turkish producers via joint ventures.

Opportunities for foreign investors include:

- Sourcing components from Turkish suppliers - particularly viable for aftermarket and 1st tier suppliers
- R & D and testing houses
- Technology transfer
- Electronics – diagnostics
- Safety, lighting (HID - Xenon), security, comfort (smart seating), audio/navigation
- Larger and sophisticated moulds

*Source:* Mustafa Bayraktar, Bayraktar Group