#### 4. INFORMATION ON THE BSL GROUP

#### 4.1 HISTORY AND BUSINESS

BSL was incorporated on 29 April 2004 as a private limited company under the name of Cabaran Satria Sdn Bhd and subsequently changed its name to BSL Corporation Sdn Bhd on 14 October 2004. Subsequently, BSL was converted into a public limited company on 6 November 2004. It is primarily an investment holding company whilst its subsidiaries are principally involved in stamping and manufacturing of precision metal parts and fabrication of tools and dies, fabrication and forging of base metal components and printed circuit board assembly and assembly of all types of electronic and electrical components, devices and system.

BSLI was founded by Mr. Ngiam Tong Kwan, which started in 1978 with five (5) metal stamping presses and five (5) employees. BSLI was initially set up to support MNC's needs for precision stamped parts and components, as many MNC were then outsourcing their production and manufacturing processes. Through strong commitment and perseverance, BSLI began a steady growth. The staff strength of the Group stands at 924 employees as at 2 September 2005 compared to five (5) employees when it first started more than 25 years ago. BSLI strives to continuously draw on new concepts of manufacturing and improve production process technology in meeting the ever-increasing standards and demands set by its customers. This has helped BSLI establish a strong customer base, with numerous MNC customers under its belt and remain competitive in the market.

In 1981, recognising the need for an in-house tool room to support BSLI's stamping operations, Kotamech was established. It began with a few simple machineries and has grown to include the full supplement of tool making machineries such as wire cut, electronic discharge machining (EDM), computer numerical control (CNC) machining centre, precision grinding machine, surface grinding machine and super drill. Kotamech concentrates on the development of new tooling and the maintenance of existing dies. Along the way, much attention was paid to the design and fabrication of new tooling to keep up with market demands for more precision products. In April 2004, Kotamech's operations were merged into BSLI to accommodate the Licensed Manufacturing Warehouse (LMW) application requirements. BSLI obtained the LMW status from the Royal Malaysian Customs in January 2005.

As part of the expansion programme for its business, BSLI moved from a tin roof factory in Selayang, Selangor to a new premise around the same area consisting ten (10) double-storey shop lots in 1983. During the same year, BSLI also increased its customer base by securing jobs from a home appliance manufacturer. In response to its MNC customers' request for localisation, BSLI began wire netting operations in 1986 for air-conditioner. BSLI started by producing simple square wire nets followed by more complex geometric wire nets. BSLI's businesses continued to grow through the late eighties and early nineties with the expansion of the factory by moving to its current premise located at Bukit Idaman, Selayang, Selangor in 1993, with a land and built-up area of approximately 7,067 and 5,909 square meters, respectively. The move was to cater to the increased in production level due to the increased number of customers, which by now included audio producers.

BSLI maintains close ties with all its customers. As a request from one of its major MNC customers to supply forged components, Unique was established in 1989 to venture into the forging industry in order to support BSLI. Unique started by producing high quality forged brass components for its MNC customers and later began forging other base metals such as copper, aluminium, carbon steel, mild steel and stainless steel, while maintaining forged brass components as its main output. Unique currently has its own customer base, which mainly comprise MNCs. During the early years of its business, Unique was essentially supplying forged balancing weight for the hermetic motor, used in air conditioners as its customers are unable to source forged components locally. In 2004, Unique has ventured into hot steel forging of automotive components. Unique currently supplies forged components used mainly in electrical and electronics products as well as parts required in the automotive industry.

As BSLI strived to provide more value-added services to its customers, Crestronics was incorporated in 1996 to cater to the audio industry's needs for sub-assembly processes. Crestronics began by providing sub-assembly processes for mini disc and cassette mechanism to BSLI's existing customers. In view of the potential for this business, Crestronics expanded its operations to include PCB assembly and moved to the present factory premise located in Klang in November 1999. The business of Crestronics has expanded from the assembly of audio components to assembly of television, air conditioner, telecommunication, microwave oven and home appliances parts.

In view of the BSL Group's growth in the metal stamping production, the Group purchased another factory premise located in Selayang, Selangor in 2004 to accommodate the increase in production level. The new factory currently houses certain production activities for BSLI.

The Group has invested in advanced machineries and equipments to ensure constant improvement in the quality of its products as well as increase in production efficiency and volume of production. Some of the major machineries and equipments purchased for production include link motion presses, robotic transfer stamping line, coil feeding machines, steel forging machines, induction heating machines, precision wire cut machines and precision auto insertion machines. Link motion presses have variable cycle speed to ensure better stamping accuracy and longer tooling life. The robotic transfer stamping line uses robots to pick and place material into dies, which helps lower the usage of manpower and reduce the rate of mistakes.

The Group imposes stringent QA on its production processes, beginning with the inspection of all incoming raw materials to ensure it is of good quality and meet specific requirements. During the production, parts/components are inspected at every process stage to minimise defects in products. Finally, the QA department would examine outgoing finished products to ensure that the products meet required specifications before being delivered to customers. This is to ensure control and continual improvement in the manufacturing systems and procedures.

At present, the Group's businesses and production activities are located at four (4) different premises, with three (3) factories situated in Selayang and another positioned in Klang. For further details on these factories, refer to Section 4.4.14 of this Prospectus.

Over the years, the Group have continuously committed to provide quality products and services at competitive prices, yet continue to be profitable. This is achieved through continuous improvement activities and by having a progressive management. Our customers' confidence is reflected not only by the various achievements and accreditations awarded to the Group, but also by the steady increase in sales on year on year basis. These awards and accreditations symbolise the recognition of high standards for its quality products and services. The Group has received ISO 9001 accreditation for Quality Management System and the ISO 14001 certification for Environment Management System for two (2) of its subsidiaries.

An overview of the Group structure and details of the subsidiaries are set out in Sections 4.2 and 4.5 respectively of this Prospectus.

### 4.2 SHARE CAPITAL

The present authorised share capital of BSL is RM250,000,000 comprising 500,000,000 BSL Shares. The existing issued and paid-up share capital of BSL is RM38,813,250 comprising 77,626,500 BSL Shares.

Details of changes in the issued and paid-up share capital of BSL since its incorporation are as follows:

Date of allotment	No. of ordinary shares allotted	Par value RM	Consideration	Total issued and paid-up share capital RM
29.04.2004	2	1.00	Subscribers' shares	2
15.10.2004	4	0.50	Share split	2
18.10.2004	196	0.50	Cash	100
28.04.2005	73,929,800	0.50	Shares issued pursuant to the Acquisitions	36,965,000
15.09.2005	3,696,500	0.50	Shares issued pursuant to the Rights Issue	38,813,250

Upon completion of the Listing, the enlarged issued and paid-up share capital of BSL will be RM49,000,000 comprising 98,000,000 BSL Shares.

Details of the subsidiaries are as follows:

		%		
Subsidiaries	Date/Country of incorporation	effective equity interest	Issued and paid-up capital	Principal activities
BSLI	30 June 1978/ Malaysia	100.00	15,000,000	Stamping and manufacturing of precision metal parts and fabrication of tools and dies
Unique	22 June 1989/ Malaysia	100.00	400,000	Fabrication and forging of base metal components
Crestronics	18 June 1996/ Malaysia	100.00	1,700,000	Printed circuit board assembly and assembly of all types of electronic and electrical components, devices and system
Subsidiary of B	SLI:			
Kotamech	22 May 1981/ Malaysia	100.00	100,000	Repairing and servicing of metal mould and stamping die. The company has temporarily ceased operations during the financial year ended 31 August 2004.

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The Group's corporate structure is depicted as follows:



### 4.3 LISTING SCHEME

As an integral part of the listing and quotation for the entire enlarged issued and paid-up capital of the Company on the Second Board, the Company undertook a restructuring scheme, which was approved by the following:

- (i) SC vide its letters dated 28 March 2005, 16 May 2005 and 9 September 2005; and
- (ii) MITI vide its letters dated 22 February 2005 and 9 September 2005.

The restructuring scheme entails the following:

### 4.3.1 Acquisitions

#### 4.3.1.1 BSLI Acquisition

The acquisition by BSL of 15,000,000 BSLI Shares comprising the entire equity interest in BSLI from Ngiam Tong Kwan, Nyeam Tong Eng @ Ngiam Tong Yang, Teh Eng Hock and Dato' Hamzah Mohd Salleh for a purchase consideration of RM34,999,900 was fully satisfied by the issuance of 69,999,800 new BSL Shares at an issue price of RM0.50 per share.

The purchase consideration of RM34,999,900 for the BSLI Acquisition by BSL was arrived at based on the audited consolidated NTA of BSLI as at 31 August 2004. The BSLI Acquisition by BSL was completed on 28 April 2005.

The new BSL Shares issued pursuant to the BSLI Acquisition ranked pari passu in all respects with the then existing BSL Shares except that they did not rank for any dividends, rights, allotments and/or distributions declared or paid prior to the allotment thereof.

### 4.3.1.2 Unique Acquisition

The acquisition by BSL of 400,000 Unique Shares comprising the entire equity interest in Unique from BSLI, Teh Yoon Loy, Teh Eng Teck and Teh Eng Seng for a purchase consideration of RM3,922,546, was satisfied by cash consideration of RM2,510,546 and the issuance of 2,824,000 new BSL Shares at an issue price of RM0.50 per share.

The purchase consideration of RM3,922,546 for the Unique Acquisition by BSL was arrived at based on the audited NTA of Unique as at 31 August 2004. The Unique Acquisition by BSL was completed on 28 April 2005.

The new BSL Shares issued pursuant to the Unique Acquisition ranked pari passu in all respects with the then existing BSL Shares except that they did not rank for any dividends, rights, allotments and/or distributions declared or paid prior to the allotment thereof.

#### 4.3.1.3 Crestronics Acquisition

The acquisition by BSL of 1,700,000 Crestronics Shares comprising the entire equity interest in Crestronics from BSLI and Yukihiro Eguchi for a purchase consideration of RM5,533,600, was satisfied by cash consideration of RM4,980,600 and the issuance of 1,106,000 new BSL Shares at an issue price of RM0.50 per share.

The purchase consideration of RM5,533,600 for the Crestronics Acquisition by BSL was arrived at based on the audited NTA of Crestonics as at 31 August 2004. The Crestronics Acquisition by BSL was completed on 28 April 2005.

The new BSL Shares issued pursuant to the Crestronics Acquisition ranked pari passu in all respects with the then existing BSL Shares except that they did not rank for any dividends, rights, allotments and/or distributions declared or paid prior to the allotment thereof.

Upon completion of the Acquisitions, the issued and paid-up share capital of BSL increased from RM100 comprising 200 BSL Shares to RM36,965,000 comprising 73,930,000 BSL Shares.

#### 4.3.2 Rights Issue

The Company completed a rights issue of 3,696,500 new BSL Shares at an issue price of RM0.50 per share, paid in full upon acceptance, on the basis of one (1) rights share for every twenty (20) existing BSL Shares held. The rights issue was completed on 15 September 2005.

The new BSL Shares issued pursuant to the Rights Issue ranked pari passu in all respects with the then existing BSL Shares except that they did not rank for any dividends, rights, allotments and/or distributions declared or paid prior to the allotment thereof.

Upon completion of the Rights Issue, the issued and paid-up share capital of BSL increased from RM36,965,000 comprising 73,930,000 BSL Shares to RM38,813,250 comprising 77,626,500 BSL Shares.

### 4.3.3 Public Offering

#### 4.3.3.1 Offer for Sale

BSL will be implementing an offer for sale by Offerors of 6,988,200 existing BSL Shares at an offer price of RM0.68 per share, representing 7.13% of the enlarged issued and paid-up share capital of BSL to Bumiputera investors approved by MITI.

#### 4.3.3.2 Public Issue

The Company will also be implementing a public issue of 20,373,500 new BSL Shares at an issue price of RM0.68 per share. The 20,373,500 new BSL Shares to be issued pursuant to the Public Issue, which represent 20.78% of the enlarged share capital of BSL are to be issued to the following parties:

#### (i) Malaysian Public

7,010,000 new BSL Shares representing 7.15% of the enlarged issued and paid-up share capital will be made available to the Malaysian Public, of which at least 30% is to be set aside strictly for Bumiputera investors.

#### (ii) Private Placement

6,470,000 new BSL Shares representing 6.60% of the enlarged issued and paid-up share capital will be placed out to investors to be identified by BSL.

#### (iii) Bumiputera Investors Approved by MITI

2,893,500 new BSL Shares representing 2.95% of the enlarged issued and paid-up share capital will be reserved for eligible Bumiputera investors approved by MITI.

#### (iv) Eligible Directors, Employees and Business Associates of the BSL Group

4,000,000 new BSL Shares representing 4.08% of the enlarged issued and paid-up share capital will be reserved for eligible directors, employees and business associates of the BSL Group.

Public Issue Shares which have been reserved for eligible directors, employees and business associates of the BSL Group described in Section 4.3.3.2(iv) of this Prospectus and not subscribed for by them ("Unsubscribed Shares") will be made available to other eligible employees. In the event that the Unsubscribed Shares are not fully taken up under the subsequent offer, the Unsubscribed Shares will be made available for application by the Malaysian Public and/or the Malaysian investors described in Sections 4.3.3.2(ii) of this Prospectus.

Upon completion of the Public Issue, the issued and paid-up share capital of BSL will increase from RM38,813,250 comprising 77,626,500 BSL Shares to RM49,000,000 comprising 98,000,000 BSL Shares.

The 20,373,500 new BSL Shares to be issued pursuant to the Public Issue will rank pari passu in all respects with the existing BSL Shares in issue except that they shall not rank for any dividends, rights, allotments and/or distributions declared or paid prior to the allotment thereof.

### 4.3.4 Listing and quotation

Pursuant to the abovementioned restructuring scheme, BSL will seek admission to the Official List of Bursa Securities and the listing of and quotation for the entire enlarged issued and paid-up share capital of BSL of RM49,000,000 comprising 98,000,000 BSL Shares on the Second Board of Bursa Securities.

## 4.3.5 Syariah Status

BSL has voluntarily submitted an application to the SC for the Syariah compliance review to be carried out by the SAC of SC as part of the process to obtain its Syariah status at the Initial Public Offering stage.

The SAC of SC has classified BSL as Syariah-approved based on the latest audited financial statements for the financial period ended 31 August 2004 and the Syariah criteria adopted by the SAC of SC.

#### 4.4 **BUSINESS OVERVIEW**

#### 4.4.1 Principal Activities

The Group is principally engaged in the production of components through specialised processes mainly for the consumer electrical and electronics industries in Malaysia. Some of the major production activities of the Group include stamping and manufacturing of precision metal parts and fabrication of tools and dies, fabrication and forging of base metal components and printed circuit board assembly and assembly of all types of electronic and electrical components, devices and system, which are carried out by its three (3) subsidiaries.

BSLI, the Group's main subsidiary is principally involved in precision metal stamping of components/parts, mainly for electrical and electronic products. It has also ventured into designing and fabrication of tools and dies to be used in metal stamping instead of purchasing the tools and dies from other parties. This enables the company to cater to various customers' specific requirements, as well as reducing the time needed to modify the tools and dies prior to commencement of production. The Group has the capability to produce tools for precision components and special processes, which gives the company a competitive advantage over its competitors.

Besides precision metal stamping, which is the main production activity of BSLI, the company is also involved in progressive cold forging, spot welding of wire netting products, assembly of electronic products and silk screen printing. Wire netting products (mainly used in air conditioners) are produced for its customers. BSLI also undertakes value-added services for its customers such as assembly of electronic products into semi-finished goods and silk screen printing whereby certain customers require some of the electrical components to be silk screen printed. This product serves as a compliment to the stamped metal components produced for its customers.

The Group produces high quality forged components using materials such as brass, copper, aluminium and stainless steel. Amongst the products manufactured by the Group are brass balancing weight for hermetic motor, used in air conditioners, gas valves and socket. In 2004, the Group ventured into hot forging of steel to forge mainly automotive components and is looking to expand into forging steel industrial components in the near future.

The core business of Crestronics, one of BSL's subsidiary, is PCB assembly, through three (3) main methods - auto insert, manual insert and SMT. In the auto insert process, machines are used to mount components onto PCB. Certain larger parts and components are required to be mounted onto PCB using manual labour as machineries are unable to perform the task. An SMT line has the ability to accurately assemble smaller and more complex chip components at higher speed onto the PCB. Crestronics also assemble box-up or module such as control box for electrical and electronics, telecommunication products, as well as solenoids.

The Group operates in four (4) factories that are fully equipped with advanced machinery and equipments used in the production processes. BSLI and Unique both operate on separate premises located in Selayang, while Crestronics' operations are based in a factory situated in Klang.

### 4.4.2 Principal Products and Services

The BSL Group offers a wide variety of products/components, mainly for use in electrical, electronic, industrial and automotive industries. The Group's principal products can be broadly categorised as follows:

- (i) stamped parts and components;
- (ii) forged components; and
- (iii) PCB and module assembly.

Shown below are the various categories of stamped parts and components, forged components as well as PCB and module assembly produced by the Group.

#### 4.4.2.1 Stamped parts and components

4.4.2.2

Category	Products		
Electrical products	Components and parts for audio player, video player, mini-compo, VCD player, DVD player, hi-fi set, home theatre system, camcorder, air-conditioner and microwave oven		
Mechanism	Minidisc loading mechanism for audio products		
Automotive products	Components for engine parts, air-conditioner parts, bracket holder for radiator water tank and car seat guide plate		
Optoelectronics	Components for digital camera		
Computer components	CD ROM and DVD ROM		
Forged components			
Forged components Category	Products		
Forged components Category Brass components	<i>Products</i> Components and parts for air-conditioner, water and gas tap, gas tank regulator, fuse and hardware use		
Forged components Category Brass components Cold rolled steel coil components	<i>Products</i> Components and parts for air-conditioner, water and gas tap, gas tank regulator, fuse and hardware use Component for air-conditioner		
Forged components Category Brass components Cold rolled steel coil components Steel-black shaft	Products         Components and parts for air-conditioner, water and gas tap, gas tank regulator, fuse and hardware use         Component for air-conditioner         Components for automatic gate, conveyor, automotive parts, hydraulic fittings and industrial parts		

#### 4.4.2.3 PCB and Module Assembly

Category	Products
Audio and video products	Components for colour television, DVD player and audio mechanism
Air-conditioner	Components for air-conditioners
Electrical appliances	Components for vacuum cleaner, electrical fan, rice cooker, refrigerator, home shower and washing machine

### 4.4.3 Technology

The BSL Group believes in using technology and process improvements to enhance production and cost efficiencies, and to ensure consistency in the quality of its products.

One of the most critical stages in the metal stamping and forging process is the design and fabrication of the metal moulds and dies. The metal moulds and dies define the end-products and determine the 3-dimensional shape as well as other physical characteristics like strategically placed and sized hole, screw threads, embossing and bending of the metal end-products. As moulds and dies ultimately determine the outcome of the final product, it is a highly skilled process where precision is required.

BSL Group recognises the importance of tooling technology and has invested in precision machinery as well as 2-dimensional and 3-dimensional CAD/CAM software. Investments in precision machinery include the purchase of precision wire cut machine from Switzerland, as well as CNC machining and precision punch grinding machine from Japan, CNC lathe, drilling and electronic discharge machines. With these precision machinery and software technology, the Group is able to produce tooling for precision components and special processes at a competitive price within a short lead time.

In 2004, the forging division has progressed into forging of products with complex geometry (3dimensional design). This has opened up a whole new market, especially for forged automotive components. Over the years, the Group has acquired its technical know-how and now has the expertise to fabricate forging moulds that have a longer life span and productivity. The Group uses innovative mould making technology known as the welding mould, which has helped reduce maintenance costs and stoppage time, thus enhancing the productivity level.

The in-house capabilities for moulds and dies fabrication provides significant advantages to the Group as it enables the Group to provide a total integrated solution to customers with its in-house capabilities, which minimises down-time with better co-ordination in terms of lead time and maintenance, ability to control the entire manufacturing process by having control over the crucial moulds and dies fabrication through to stamping and forging to product assembly, as well as the ability to be cost competitive.

#### 4.4.4 Production Process

The main production processes of the Group are as follows:

#### Design and fabrication of tools and dies



The Group produces its own tools and dies which are used in the metal stamping and forging processes. These tools and dies are fabricated according to customers' products specification. Once customers' products specification is received, a team of design engineers would begin designing the tools and dies to be used for production of the component, using the Auto CAD/CAM software. Subsequently, the tools and dies would be produced based on the customers' approved design. A sample of the component would then be produced and submitted to customers for sample testing. The customers would revert with comments and extra/other features to be added to the components. Consequently, the tools and dies would be produced and sent to customers' specifications and a new sample of the component would be produced and sent to customers for checking. Once the customers are satisfied with the sample components with no further modifications required, production of the stamped component would commence.

#### Wire netting products

The Group also produces wire netting for air conditioners through spot welding of wires. These wire netting products are produced only for current customers, as a supplementary product to the stamped parts and components.

### Stamped metal components/parts



All incoming raw materials are inspected upon receipt to ensure that they meet the required material specifications. Subsequent to the inspection, the raw materials, which mainly consist of metal coils of different sizes and thickness, would be used in the stamping process. There are two (2) types of stamping method: single stage and progressive stamping.

#### Single stage stamping

Single stage stamping consists of one (1) stamping process per stamping press and metal sheets are inserted manually into each stamping machine. Single stage stamping can be done by manual and robotic manner. The former uses manual labour to insert metal sheets and remove stamped parts from the stamping machines, while the latter uses automated machines to carry out the insertions and removals.

#### **Progressive stamping**

This method of stamping involves a few stamping procedures within a single press. A metal coil feeder is used to insert metal coil into the stamping machine. The metal coil would go through various procedures within a single press before the final stamped part is completed.

The progressive stamping technique is used to produce more complicated stamped parts, which require many processes to complete a component, while single stage stamping is used to produce simpler stamped parts. The stamped parts and components would have to meet specific requirements in terms of dimension, thickness, hole diameter and flatness. Stamped parts would be in-process inspected, which means that the stamped parts would be inspected during production to ensure that there are no defects. In the event that any defects occur during production, the production of the parts would be discontinued until the problem has been rectified.

The secondary processes serves to add value to the stamped parts and components. These would include cleaning, heat treatment, tapping and welding. Upon completion of secondary processes, the stamped parts and components are completed for final outgoing inspection before the stamped parts and components are ready for delivery or transferred to the assembly department for further processing. All stamped parts and components would be inspected to make certain that there are no defects such as dents, scratches, missing hole, crack, burr, flaw and rust. Components with flaws would either be reworked or discarded, depending on the extent and type of defects.

Certain stamped parts and components that require assembling will be sent to the assembly department. In the event the stamped parts and components does not require assembling, the said parts and components will be packed and delivered to customers.

In the assembly department, stamped parts and components that have gone through secondary processes are assembled into metal or plastic parts or components in accordance to specifications and stringent requirements of the customers. Upon completion of the assembly process, the assembled metal parts or components would be subject to out-going inspection before being packed and delivered to customers.

#### Forging - balancing weight



The Group mainly produces forged brass balancing weight for hermetic motors used in air conditioners. The main material used in forging balancing weight is brass bar. The brass bars come in different sizes and would be inspected upon receipt to ensure that it meets the material specification. These brass bars will be cut into precise lengths and bend according to the shape of a balancing weight. Following that, the brass pieces would be heated in a liquid petroleum gas furnace up to a maximum of 700 degrees Celsius (any heating above 700 degrees Celsius would cause the brass to melt) until it is soft, and subsequently be forged in the forging machine. The excess brass would be trimmed off the sides of the balancing weight and the edges would be smoothened in a process called deburring. After the deburring process, brass debris would be removed from the balancing weight using a vibrating machine filled with liquid chemical. The balancing weight would then be placed in a drilling machine to create threads for screws at both ends. Pursuant to that, the ends of the threads would be smoothened (chamfering). To enhance the appearance of the balancing weight, it is placed in a shot blasting machine for polishing to ensure that it is shiny and free from flaw.

The base of the balancing weight is levelled using a smooth grinding stone and would be placed on a flatness block to ensure its flatness. Subsequent to this, the balancing weight would be weighed using an electronic weighing machine. The weight of the balancing weight is of utmost importance, as minimal discrepancy would affect the component's effectiveness. Any balancing weight in excess of the tolerance level would be reworked, while those below the tolerance level would have to be discarded as waste.

The balancing weights that adhere to the specified weight and quality are packed according to customers' requirements and are inspected for a final time for quality control before being delivered to customers' premises.

### Hot forging of steel



The Group has also ventured into producing components for the automotive industry using the hot forging technique. The diagram above is a summary of the hot forging process for steel. All raw materials are checked by an inspector upon receipt to ensure that it meets specific material requirements to be used in the production. The raw materials used mainly consist of six (6) metres round mild steel bars of different sizes (diameter).

The materials are then cut into specific measurement and weight (according to the type of products). Each piece of the cut material would be weighed on a weighing machine to ensure consistency in the weight of the materials. Subsequently, the steel pieces would be placed in an induction furnace for high temperature heating (1200 degrees Celsius). After the heating process, the softened steel pieces would go through a bending process, which would eliminate carbon residue on the steel, before being forged. The excess steel would be trimmed off the edges after the forging.

Following the trimming process, the components would be put in a drilling machine for fabrication of threads for screws. Pursuant to that, the ends of the threads would be smoothened in the chamfering process. The forged components would then be placed in a shot blasting machine containing steel grit for polishing and finishing of the component. Each component would be inspected for quality control to ensure that it meets the specified product requirements. Components with imperfections would be reworked to ensure that it meets the necessary condition. All completed components would go through a final inspection before being packed according to customers' specifications and delivered to them.

### PCB assembly



The flow chart above shows a typical PCB assembly process. PCB is the base on which most electronic and electrical products are built to connect components to a system and to provide control and functionality of products. It is generally a flat, multi-layered board made out of insulated material with electronics circuits on the surface of the board. PCB assembly is the process of mounting electrical and electronics components onto the PCB to provide electrical connections. Further details of the PCB assembly processes are shown below.

### **PCB** Auto Insertion



Auto insertion draws on the use of various machineries to assemble PCB. The main processes of the auto insertion method include the eyelet insertion, jumper, axial and radial assembly. Eyelets are assembled into the PCB to provide housing for other components in the Eyelet Insertion process. Following that is the jumper assembly, whereby jumper wire would be mounted onto the PCB. These are copper based wires used to connect the circuits in the PCB assembly. The PCB would then be transferred to the Axial Insertion Machine (AV) for mounting of axial type components, such as resistors, capacitors and diodes on the PCB. Subsequent to that, the PCB would be placed in the Radial Insertion Machine (RH) for the assembly of radial components, such as transistors, variable resistors and electrolytic capacitors on the PCB.

Once the auto insertion process is completed, the PCB (output) would be placed on a pin jig to ensure all components are inserted. A "first piece sample check" is conducted on every machine before the commencement of mass production to ensure the accuracy and quality of the PCB. PCBs that have missing or misplaced components would be reworked manually before proceeding to the following process. Subsequent to the auto insertion, the assembly of PCB would continue with the SMT process.

#### PCB SMT



SMT is a specialised technology of mounting chips and components onto the PCB. A SMT line usually consists of solder paste machine, glue/bond dispensing machine, chip mounting machine, IC mounting machine and reflow oven.

The SMT process begins with the deposit of solder paste onto the PCB through a printing process. This is done using the solder paste machine to deposit solder paste by stencil printing the paste onto the PCB. The height of the solder paste and precision of printing is critical for finer pitch components (ie. for pitch less than 0.5mm). The bonding procedure uses the glue/bond dispensing machine to dispense glue to relevant areas where components are to be mounted onto the PCB. The applied glue will bond and secure the components to the PCB especially when passing through the reflow oven. Subsequent to bonding, chips are mounted onto the PCB using the chips mounting machine at a high speed, followed by the mounting of IC and other odd-shaped components using the IC mounting machine at a slower speed as compared to chips mounting. Ensuing the mounting of components, the PCB would be transferred to a high temperature reflow oven for the reflow process to secure components onto the PCB.

The components would be firmly secured to the PCB when the paste/glue solidifies at the cooling zone of the oven. The speed of the conveyor belt and oven temperature are critical parameters in this process and would be monitored closely. Following the reflow process, PCB would be inspected by an auto image inspection machine to ensure that all components are placed accurately. Any misplacement would be reworked and inspected again, before carrying on to the next process stage.

#### **PCB** Manual Insertion



The manual insertion lines consist of assembly lines with labour operators and the double wave soldering dipping machines. The manual insertion process involves manual insertion of components that cannot be inserted by machines onto the PCB in the SMT line. These components include mechanical, big and odd sized components such as connectors, heat sink and lead wires, which are inserted by manual labour on a conveyor. The assembled PCB would pass through the solder machine, which consists of two waves of molten lead free solder. The exposed leads of the manually inserted components would be coated with the lead free solder as the PCB passes through the machine, which would create a solder joint whereby the manually inserted components are secured onto the PCB. The excess solder or wire leads would then be trimmed. Subsequent to the trimming, the joints with solder would be touched-up using manual solder.

All assembled PCB would go through in circuit testing on an in circuit tester to ensure that all circuits are complete. Following the in circuit checking, the PCB would undergo the function check on the function tester, whereby it would be tested for its intended function. Once the PCB have passed the two tests mentioned above, most PCB would be delivered to customers. However, there are certain PCB which would be further developed in the final assembly stage as shown below.

#### Final Assembly



This is the integration process whereby assembled PCB, wires and transformers are assembled to plastic or metal chassis to form box-up or module assembly. Final assembly also includes products without assembled PCB such as solenoid and mechanical/mechanism assembly.

PCB which are assembled for washing machines would have to go through an additional stage of water proof potting, where melted silicon would be poured onto the PCB to form a layer of waterproof coating for the components. The PCB would subsequently be baked in an oven for the layer of silicon to set in.

Once the product has been completed, it would undergo a final testing to ensure that all elements are functional and conform to customers' specifications. The completed and tested products would be sent to the QA division for thorough testing and checking before it is approved for delivery to customers.

### 4.4.5 Market Coverage/Position

**4.4.5.1** The estimated market position for leading one-stop metal stamping players are shown below:

Companies	Revenue <sup>1</sup> (RM'mil)	Year	Estimated Market Share <sup>2</sup> (%)
AE Technology Sdn. Bhd. <sup>3</sup>	270	2003	28
CS Metal Industries (M) Sdn. Bhd.	153	2002	16
Kein Hing Industry (M) Sdn. Bhd.	98	2004	10
Jotech Holdings Bhd	76	2003	8
Seksun Technology Sdn. Bhd.	76	2003	8
BSL Corporation Berhad	72 4	2004	8
Tekun Asas Sdn. Bhd.	44	2002	5
Wong Engineering Sdn. Bhd.	44	2002	5
Atlan Holding Bhd	37	2003	4
Kobakin (M) Sdn. Bhd.	33	2003	3
Others <sup>5</sup>	45		5
Total	948		100

Notes:

- Revenue figures based on latest available information as depicted in "Year" column
- <sup>2</sup> Estimated market share based on latest available revenue figures
- <sup>3</sup> 100% metal stamping subsidiary of Kris Components Bhd
- <sup>4</sup> Revenue contributions by metal stamping and PCB assembly operations only
- <sup>5</sup> Estimated revenue on other one-stop metal stamping solutions providers in Malaysia

(Source: Summary of IMR)

Company	Revenue (RM'mil) <sup>1</sup>	Year	Estimated Market Share <sup>2</sup>	Brass Products
George Kent (M) Bhd	111	2003	79%	Water meters
Unique Forging & Components Sdn Bhd <sup>3</sup>	10	2004	7%	Weight balancer, burner caps, gas & water valves
AE Systems Manufacturing (M) Sdn Bhd <sup>4</sup>	9	2003	6%	Bolts, nuts
Master Shanghai Turnparts Sdn Bhd	3	2002	2%	Valves for gas cooker
Others	7 <sup>5</sup>	2004	6%	Miscellaneous
	140		100%	

**4.4.5.2** The leading players for hot forging of brass products in Malaysia are shown below:

#### Notes:

- Revenue figures based on latest available information as depicted in "Year" column
- <sup>2</sup> Estimated market share based on latest available revenue figures
- <sup>3</sup> 100% Owned Subsidiary of BSL Corporation Bhd
- <sup>4</sup> Subsidiary of Kris Components Bhd
- <sup>5</sup> Estimated revenue on other hot forging players in the brass product market in Malaysia

(Source: Summary of IMR)

#### 4.4.6 Principal Markets

Presently, the principal market for the Group is contributed by MNCs, which are based in Malaysia with their headquarters located mainly in Japan and Korea such as JVC Electronics (M) Sdn. Bhd., Matsushita Electric Co. (M) Bhd. and Samsung Electronics (M) Sdn. Bhd.. The domestic revenue accounted for 99.2% of the Group's total revenue for the seven (7)-month financial period ended 31 March 2005 whilst the remaining 0.8% of revenue was contributed by exports to Singapore and Japan. Some of the Group's products are also indirectly exported to other countries such as China, Germany, France, Australia, Japan and Indonesia through its MNC customers.

Precision metal stamped components and parts contributed to majority of the Group's revenue which accounted for 66.1% of its revenue for the seven (7)-month financial period ended 31 March 2005. The remaining 10.5% and 23.4% of the total revenue were contributed by forged components and PCB and module assembly divisions, respectively.

### 4.4.7 Sources and Availability of Raw Materials

Steel is one of the major raw materials used by the Group in manufacturing high precision stamped metal components and parts. Steel could come in the form of coils and sheets with various sizes and thickness, depending on its intended usage. The material is mainly sourced from local coil slitting companies. These companies would import steel coils from Japan and Korea before re-slitting them for local companies' usage.

Besides that, the main raw materials used in forging are brass and steel, which are sourced locally. For raw materials that are unable to be sourced locally (such as carbon steel), it would be imported from countries such as China and Taiwan. However, this only accounts for a small portion of raw materials as most forged components are produced using brass and steel. Some of the other materials used for forging include aluminium, stainless steel and copper.

The assembly arm of the Group require parts and components such as IC, semi-conductor, PCB, fixed carbon film resistor, surge absorber and other sub-materials such as bobbin, copper wire, solder bar, yoke and plunger to be used in the PCB assembly. Most of these components and parts are on consignment from customers, as many customers would have their own choices of suppliers for products that meet certain specifications. There are some common or general components that the Group purchases from its own suppliers.

The Group sources its raw materials at competitive prices from a pool of suppliers with established business relationships with the Group. Some major MNC customers have assisted the Group in obtaining favourable terms under their global bulk purchase arrangement with suppliers. Due to the Group's track record for its prompt payment commitments, the Group enjoys a good working relationship with its suppliers and expects that its suppliers will be able to support any material increase in raw material requirements arising from the anticipated increase in the future output of the Group. Most suppliers could also be relied upon to supply the materials within a short notice.

# 4.4.8 Quality Assurance

The Directors of the BSL Group consider the consistent high quality of products as an essential attribute in retaining existing customers and attracting prospective customers. As part of the Group's emphasis on product quality, the Group has a sound QA system to meet these stringent requirements.

The Group's QA department is set up in accordance with the requirements of ISO 9001. Products are inspected at every stage from receiving and manufacturing stage, up to the delivery of goods to customers. In order to ensure future competitiveness, the Group's quality control personnel are trained to focus on defect prevention instead of just detection. The R&D team contributes towards quality improvement by constantly upgrading on die design and manufacturing processes.

BSLI obtained the ISO9002:1994 certification in 1998. In 2003, this certification was upgraded to the latest version, ISO9001:2000. Developed countries such the United States of America and the European Union are legislating towards environmentally friendly manufactured products. Towards this end, BSLI has achieved the prestigious ISO14001:1996 accreditation for Environment Management System in February 2005. These ISO certifications represent an endorsement of the quality management practices of the Group, particularly in its policies, procedures, resources and training. This also provides customers with the assurance of quality of the Group's products and that the products are produced with minimal impact to the environment.

Unique has been practising the Japanese customers' standard of QC since it began operations, whereby it needs to adhere strictly to its MNCs standard QC process. This enables Unique to have control over the components at each process to minimise reject rate. Immediate action would be taken should there be any abnormal parts being forged, which serves as cost control method. Unique is in the process of obtaining the ISO 9001:2000 accreditation.

Crestronics received the ISO 9001:2000 in April 2004, which certifies Quality Management System. With this accreditation, Crestronics' customers would be confident on the quality and standard of its products. Crestronics achieved the ISO 14001:1997 certification for Environment Management System in March 2005.

To further enhance the QA control, Crestronics has various in-house testing equipments such as the camera inspection machine, in-circuit tester and function tester. These equipments are used to reduce the rate of defects in products as Crestronics is working towards achieving zero defects in the production lines.

#### 4.4.9 R&D

The BSL Group emphasises on R&D as it plays an important role, particularly in creating and sustaining competitive advantages through the continuous upgrade of product quality to ensure customer satisfaction, increase in production effectiveness, efficiency and productivity to minimise costs as well as the creation of new products and services to address areas of growth and opportunities.

As part of the Group's expansion and growth strategy, the design and engineering division of all the subsidiaries work closely with their customers to ascertain ways for improvement in the production processes and output.

BSLI's R&D team is entrusted with the tasks of improving die designs to have longer life span, higher productivity level as well as lower tooling maintenance cost. Besides that, the team is also responsible for the improvement of current manufacturing processes and the development of alternative manufacturing processes, which would have a higher productivity output and lower defect rate. The R&D team is also constantly looking at ways to improve products and would recommend feasible changes of products to customers.

Unique is regularly doing development for its clients in terms of cost saving and productivity. The R&D team is always looking for ways to reduce the wastage of raw material and work load of machining, increase the life span of the moulds and dies, and improve the quality of forged parts.

Regular research had resulted in the purchase of a coiling press for the forged part. With the coiling press, wastage of scrap has been reduced, which leads to a reduction in material cost by almost 20%. This has made Unique's products more competitive as compared to similar products imported from China. Through the use of coiling press, the machining cycle for forged parts and components has been drastically reduced, which has caused a decline in the cost of maintaining moulds. Lastly, product quality has been significantly improved due to thinner and elimination of parting lines.

Unique's development did not stop here as the company has started developing new moulds using different materials and methods which can result in longer life span of the mould, higher productivity level, lower maintenance required, increased efficiency as well as the reduction in cost of production.

Crestronics works closely with its customers to provide R&D integration services on the development of PCB assembly. Based on the proposed PCB design, Crestronics would use their technical knowledge, available resources and experiences to research on the manufacturability of the new products. The R&D team would also propose feasible cost competitive electronic components to be used in the new products. The R&D team for Crestronics is responsible for process development and continuous improvement of production activities to achieve lower standard time and higher efficiency level.

The Group's R&D division is headed by the R&D/Engineering Manager, Mr. Lee Soon Hook, supported by five (5) experienced personnel. The R&D team carry out R&D activities on an on-going basis, in line with BSL Group's continuous improvement to enhance product quality.

The estimated amount spent on R&D for the last three (3) financial years were as follow:

Financial year ended 31 August	R&D expenditure RM'000	% of revenue
2002	298	0.31
2003	323	0.44
2004	353	0.44

As part of the continuous improvement effort of the Group, the R&D team is currently working towards improving die design to increase the stamping speed and the development of dies for aluminium appearance products. Another effort which the R&D team has been working include auto oiling in stamping and tapping processes to increase productivity and efficiency of the processes.

The Group's long term intention is to stay ahead of its competitors. To achieve this, it will seek to develop new products processes and services to remain competitive. Some of the more notable achievement of the Group's successful R&D which are currently in use include the following:

- (i) Process change: instead of in-die hole punching, BSLI utilised automated hole punching machine;
- (ii) Process change: recommended roll on coating in replacement of spray painting for cost reduction;
- (iii) Material substitute: recommended cheaper alternative material to customers such as the replacement of stainless steel with electrolytic tin plates (SPTE);
- (iv) Improved progressive die design; and
- (v) Introduced lead free soldering technique and optimum usage of SMT solder paste.

The achievements above have helped reduce tooling and process cost as well as increased the design flexibility. The successful improvement in the Group's progressive die design, has enabled the production of complicated products and reduction of reject rates.

#### 4.4.10 Interruptions in Operations

The BSL Group did not experience any interruption in business having significant effect on its operations for the twelve (12) months prior to the date of this Prospectus.

#### 4.4.11 Information on Employees

As at 2 September 2005, the Group had a total of 924 employees. The total number of employees of BSL Group with breakdown into categories and their average length of service are as follows:

Categories of staff	No	). of employe	Average length of service	
0	Local	Foreign	Total	Years
Management and professional	34	1	35	11
Technical and supervisory	160	9	169	6
Clerical and related operations	49	-	49	3
General worker	12	3	15	5
Factory worker - skilled	278	141	419	4
- unskilled	95	142	237	2
Total	628	296	924	-

As at 2 September 2005, the Group has 69 contractual workers, all of which are foreign unskilled factory workers.

The Group have in place a formalised training and development programme for its employees with on the job training, in-house training and external training, such as process solving and process improvement courses, the ISO14001 awareness training, material planning and inventory control, store warehouse operation and management as well as effective managerial skills training to improve their work performance.

None of the employees of the Group is a member of any unions and the employees enjoy a cordial relationship with the management. There have not been any industrial disputes in the past between the employees and the management of the Group.

### 4.4.12 Key Achievements/Awards

BSL Group's businesses can be traced back for more than twenty (20) years. Its concerted efforts in satisfying clients' needs and demands are well established in the industry. The Group's strength lies in its ability to customise high quality products to meet customers' needs within a short period of time at competitive rates.

Year	Milestones
1978	BSLI started operations in a small factory in Selayang
1981	BSLI started its own in-house tooling by setting up Kotamech to fabricate and design tools and dies
1983	BSLI expanded from tin roof factory to ten (10) double-storey shop lots within the same vicinity
1986	The Group began wire netting production as a support service for its MNC customers
1989	The Group diversified into forging for one of its major MNC customer via Unique
1993	The Group relocated its core operations to its current factory premise in Selayang
1996	The Group ventured into mechanical and mechanism assembly
1998	BSLI achieved the ISO 9002:1994 certification
1999	The Group started its PCB assembly operations in Klang via Crestronics
	Crestronics obtained the LMW status
2003	BSLI obtained the ISO 9001:2000 certification
2004	The Group ventured into steel forging of automotive components for the automotive industry
	BSLI purchased another factory premise in Selayang for the expansion of its metal stamping operations
	BSLI introduced the silk screen printing facilities to further enhance the range of facilities provided to its customers
	Crestronics attained the ISO 9001:2000 certification
2005	BSLI achieved the ISO 14001:1996 certification and the LMW status
	Crestronics obtained the ISO 14001:1997 certification

Below sets out the key achievements obtained by the BSL Group:

Below are the key accreditations given to the Group by its customers:

Year	Key Awards by customers
BSLI	
1980	Outstanding Achievement by Matsushita Electric Industrial Co. Ltd
1981	Glorious Achievement by Matsushita Industrial Corporation Sdn Bhd
1990	Best Performance by Matsushita Air-con Group of Companies
1993	Best Performance by Matsushita Air-con Group of Companies
1995	Appreciation Award by JVC Electronics (M) Sdn Bhd
1996	Gold Award by Matsushita Air-con Group of Companies
1997	Best Supplier by JVC Electronics (M) Sdn Bhd
1997	Best Quality by Denso (Malaysia) Sdn Bhd
1998	Best Quality by Denso (Malaysia) Sdn Bhd
1998	Silver Award by Phillips and JVC Video (Malaysia) Sdn Bhd
2000	<i>Q-UP Campaign Award</i> by Matsushita Television & Network Systems Co. (M) Sdn Bhd
2002	Certificate of Appreciation by JVC Electronics (M) Sdn Bhd
2002	Best Quality Award/Best Supplier Performance by JVC Electronics (M) Sdn Bhd
Uniaue	
emque	
1992	Best Performance Award by Panasonic Compressor Malaysia Sdn Bhd (formerly known as Matsushita Compressor And Motor Sdn Bhd)
1994	Special Effort Award by Panasonic Compressor Malaysia Sdn Bhd (formerly known as Matsushita Compressor And Motor Sdn Bhd)
1997	Special Effort Award by Panasonic Compressor Malaysia Sdn Bhd (formerly known as Matsushita Compressor And Motor Sdn Bhd)
2002	Appreciation Award by Panasonic Compressor Malaysia Sdn Bhd (formerly known as Matsushita Compressor And Motor Sdn Bhd)
Crestronics	
1998	Best Quality Improvement Supplier by JVC Electronics (M) Sdn Bhd

#### 4.4.13 Modes of Marketing and Distribution

The Group mainly deals with MNCs whereby deals are secured on a purchase order basis based on the MNC's production requirement. It is essential for the Group to maintain a sound marketing and distribution strategy in order to retain good customer relationship.

The Directors of BSL attribute the success of the Group to its understanding of customers' needs and requirements through frequent visits, consultations and discussions with its customers. The Group's sales and marketing division places strong emphasis on continuous development and improvement of its marketing strategy and distribution channel.

As part of the Group's marketing strategy, the Group has ventured into cooperating with customers in the design and product development stage. This strategy is used by the Group to position itself as a manufacturer with the capability to provide higher value added services and integrated facilities to its customers in order to sustain and expand the Group's business.

As an extension to the Group's marketing strategy, the Group utilises direct channels of distribution through an in-house sales and marketing team. The rationale behind this move is to enable the Group to market its products effectively as most precision metal parts and components are customised to customers' requirements and require significant technical knowledge. Besides that, direct distribution of goods to customers serves as a channel to boost the Group's reliability in on-time and accurate delivery of products to customers.

To further promote its products and services to potential customers both locally and overseas, the Group has registered itself with the Federation of Malaysia Manufacturer (FMM).

#### 4.4.14 Principal Assets and Production Capacities and Output

The locations of production facilities of the Group and their respective production capacities and utilisation are as follows:

Location of Plants	Land/ Built- up Area (sq. m)	Annual Production Capacity	Current Annual Production^	Capacity Utilisation %
Lot 47687 Jalan Bukit Idaman 6 Taman Bukit Idaman 68100 Batu Caves Selangor	7,067/ 5,909	352,634,880 strokes	290,923,776 strokes	83
Lot 17513 & 17508 Jalan 2 Selayang Industrial Park 68100 Batu Caves Selangor	2,926/ 2,364	17,971,200 strokes*	14,826,240 strokes	83

Location of Plants	Land/ Built- up Area (sq. m)	Annual Production Capacity	Current Annual Production^	Capacity Utilisation %
Lot 1029 &1030 Jalan Besar Selayang Baru 68100 Batu Caves Selangor	3,837/ 2,878	7,300,800 units	5,704,274 units	78
Lot 5002, Batu 5 ½ Jalan Meru 41050 Klang Selangor	10,906/ 6,651	672,863,292 points	544,300,000 points	81

This factory started operations in September 2004. The annual production capacity is computed based on the current production capacity of the factory with thirteen (13) stamping machines in operations.
 Current annual production is derived based on an average of one production shift per day.

#### 4.5 SUBSIDIARIES

### 4.5.1 Information on BSLI

#### 4.5.1.1 History and business

BSLI was incorporated in Malaysia on 30 June 1978 under the Act as a private limited company. The company commenced operations in 1978 and is principally involved in stamping and manufacturing of precision metal parts and fabrication of tools and dies.

### 4.5.1.2 Share capital

As at 2 September 2005, the authorised and issued and paid-up share capital of BSLI are as follows:

	RM
Authorised	
Ordinary shares of RM1.00 each	25,000,000
Issued and paid-up	
Ordinary shares of RM1.00 each	15,000,000

#### 4.5.1.3 Changes in share capital

The changes in the paid-up share capital of BSLI since its incorporation up to 2 September 2005 are as follows:

Date of allotment	No. of shares allotted	Consideration	Cumulative issued and paid-up share capital RM
30.06.1978	2	Cash	2
14.08.1979	55,000	Cash	55,002
21.07.1981	41,250	Cash	96,252
05.07.1989	53,748	Cash	150,000
04.06.1990	50,000	Cash	200,000
29.09.1991	300,000	Bonus issue	500,000
12.09.1995	300,000	Bonus issue	800,000
12.09.1995	200,000	Cash	1,000,000
28.04.2005	14,000,000	Bonus issue	15,000,000

#### 4.5.1.4 Substantial shareholders

BSLI is a wholly-owned subsidiary of BSL as at 2 September 2005.

### 4.5.1.5 Subsidiaries and associated companies

As at 2 September 2005, BSLI has a wholly-owned subsidiary, Kotamech which was incorporated in Malaysia on 22 May 1981.

BSLI does not have any associated companies as at 2 September 2005.

### 4.5.2 Information on Unique

### 4.5.2.1 History and business

Unique was incorporated in Malaysia on 22 June 1989 under the Act as a private limited company. The company commenced operations in 1989 and is principally involved in fabrication and forging of base metal components.

### 4.5.2.2 Share capital

As at 2 September 2005, the authorised and issued and paid-up share capital of Unique are as follows:

	RM
Authorised	
Ordinary shares of RM1.00 each	500,000
Issued and paid-up	
Ordinary shares of RM1.00 each	400,000

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# 4.5.2.3 Changes in share capital

Company No.

4.

The changes in the paid-up share capital of Unique since its incorporation up to 2 September 2005 are as follows:

Date of allotment	No. of shares allotted	Consideration	Cumulative issued and paid-up share capital RM
22.06.1989	3	Cash	3
18.07.1989	135,350	Cash	135,353
25.10.1989	164,650	Cash	300,003
01.07.1995	99,997	Cash	400,000

## 4.5.2.4 Substantial shareholders

Unique is a wholly-owned subsidiary of BSL as at 2 September 2005.

# 4.5.2.5 Subsidiaries and associated companies

Unique does not have any subsidiaries or associated companies as at 2 September 2005.

# 4.5.3 Information on Crestronics

# 4.5.3.1 History and business

Crestronics was incorporated in Malaysia on 18 June 1996 under the Act as a private limited company. The company commenced operations in 1996 and is principally involved in printed circuit board assembly and assembly of all types of electronic and electrical components, devices and system.

# 4.5.3.2 Share capital

As at 2 September 2005, the authorised and issued and paid-up share capital of Crestronics are as follows:

	RM
Authorised	
Ordinary shares of RM1.00 each	5,000,000
Issued and paid-up	
Ordinary shares of RM1.00 each	1,700,000

#### 4.5.3.3 Changes in share capital

The changes in the paid-up share capital of Crestronics since its incorporation up to 2 September 2005 are as follows:

Date of allotment	No. of shares allotted	Consideration	Cumulative issued and paid-up share capital RM
18.06.1996	3	Cash	3
25.09.1996	49,997	Cash	50,000
16.08.1999	50,000	Cash	100,000
20.04.2000	50,000	Cash	150,000
26.06.2000	300,000	Bonus issue	450,000
26.06.2000	1,250,000	Cash	1,700,000

#### 4.5.3.4 Substantial shareholders

Crestronics is a wholly-owned subsidiary of BSL as at 2 September 2005.

### 4.5.3.5 Subsidiaries and associated companies

Crestronics does not have any subsidiaries or associated companies as at 2 September 2005.

### 4.5.4 Information on Kotamech

#### 4.5.4.1 History and business

Kotamech was incorporated in Malaysia on 22 May 1981 under the Act as a private limited company. The company commenced operations in 1981 and is principally involved in repairing and servicing of metal mould and stamping die. Kotamech has temporarily ceased operations during the financial year ended 31 August 2004.

### 4.5.4.2 Share capital

As at 2 September 2005, the authorised and issued and paid-up share capital of Kotamech are as follows:

	RM
Authorised	
Ordinary shares of RM1.00 each	100,000
Issued and paid-up	
Ordinary shares of RM1.00 each	100,000

### 4.5.4.3 Changes in share capital

The changes in the paid-up share capital of Kotamech since its incorporation up to 2 September 2005 are as follows:

Date of allotment	No. of shares allotted	Consideration	Cumulative issued and paid-up share capital RM
22.05.1981	3	Cash	3
30.07.1981	55,000	Cash	55,003
15.09.2000	44,997	Cash	100,000

### 4.5.4.4 Substantial shareholders

Kotamech is a wholly-owned subsidiary of BSLI as at 2 September 2005.

### 4.5.4.5 Subsidiaries and associated companies

Kotamech does not have any subsidiaries or associated companies as at 2 September 2005.

#### 4.6 INDUSTRY OVERVIEW

#### 4.6.1 Global Economy

The world's GDP growth improved from an average of 2.1% in 2001-2002 to 3.0% in 2003. World output and trade are projected to expand at a faster pace of 4.1% and between 5%-6% respectively in 2004. Acceleration in growth accompanied by a pick up in the development of the industrial countries has been the hallmark of the recovery in global markets. An upsurge in corporate spending on Information Technology ("IT") investments in the United States ("the US"), Euro Area and Japan towards the end of 2003 have put on the momentum for further global recovery in 2004. These trends suggest that both the world economy and global trade are anticipated to improve.

In the developing nations, GDP growth is expected to climb to 5.3% in 2004, thus recording an increase of 1.2% over the period 2003-2004. The growth dynamics in this segment of the world are still very much export-oriented. The People's Republic of China ("the PRC") continues to lead the pack with a forecasted GDP growth of 7.9% for the year 2004 after registering an average gain of 7.5% in 2002-2003. Elsewhere in Asia, the acceleration is expected to be more passive. Excluding the PRC, growth in Asia ex-Japan is expected to hit only 4.6% in 2004, only a slight increase from the 4.1% registered in 2002-2003. This is backed by robust export performance and higher contribution from domestic demand.

In the developing countries, investor confidence behaviour has become a key element of their economic outlook. Geopolitical uncertainties and jitters in the financial markets are keeping investors cautious throughout most parts of the world. Sudden reversals in capital flows can dampen investments sharply and weaken the growth momentum. Hence, countries with strong and consistent policies in place are more likely to avoid external financial shocks. The downside risks to the forecasts include the emergence of other flash points in the Middle East, terrorist reprisals, possible hike in US interest rates, the cooling of the Chinese economy and the uncertainty in oil prices. The softening of the US economy is anticipated as it squeezes its financial policy after a strong recovery momentum and gradual inflationary pressure, coupled with the tapering off of the tax-cut stimulus in the coming months. However, the consensus is that the US economic slowdown is not likely to be significant and should not lead to another global meltdown.

The expected slowdown of growth in the Chinese economy is expected to have an impact on its demand for exports. The PRC has been working hard to curb over investment, which may result in an overheated economy via raising bank loan requirements, restricting bank credits and increasing the electricity rates in hopes of steering the economy towards a soft landing. Meanwhile, the situation will be further complicated if the current high crude-oil prices are prolonged. Possible impacts could include a slowdown in global economic growth, a full blown recession in the US, and also a hard landing for the Chinese economy. However, the risks of high oil prices are limited because the global economy is in a "low-inflation environment" and, is stronger and able to withstand such hikes in oil prices.

(Sources: IMR and Summary of IMR)

#### 4.6.2 Malaysian Economy

Malaysia, like most of the members in ASEAN is experiencing a pick up in its economic growth with a GDP of 5.3% in 2003. Consumption continued to be the main driver of demand growth, contributing 3.1 percentage points to the overall GDP strengthening. Private consumption rose by 5.1% and public consumption by 7.9% as the Government rose its spending. Net exports contributed 2.0 percentage points to the expansion in GDP. Gross fixed capital formation grew by 2.7% in the year, accounting for 0.8 percentage point of growth. Total investment actually declined by 0.9%, due to a drop in inventories.

Based on GDP by sector for 2003, the GDP for manufacturing sector increased by 8.3% as the global economic recovery accelerated in the second half of the year to lift demand for electronics goods, the country's major export.

The Malaysian economy entered 2004 on a stronger overall growth performance recording a strong economic growth of 7.8% in the first half of 2004. However, following two consecutive quarters of strong growth averaging 8% real GDP growth, the Malaysian economy slowed slightly to register 6.8% growth in the third quarter of 2004. The slowdown continued into the fourth quarter of 2004 as real GDP growth was recorded at 5.6% (Figure 1). Overall, the Malaysian economy expanded by 7.1% for 2004, which is the highest GDP growth recorded since 2001. The slowdown is in line with regional and global economic growth trends. Growth was driven mainly by the private sector as the public sector remained committed to fiscal consolidation program. The expansion in domestic demand was attributed to stronger household consumption and sustained private investment activities.





Source: Bank Negara Malaysia, 2005

Figure 2 illustrates that Malaysia's real GDP grew by 5.3% in 2003, driven by higher consumer spending, soaring exports and stronger growth in investments. In 2004, all sectors in the economy showed positive growth except the construction sector, with the manufacturing sector leading the way with 9.8% compared with 8.3% in 2003, mainly due to a favourable external environment. China's continued strong growth, Japan and US's firm recovery served as catalysts to the higher demand for manufactured goods, particularly for electrical and electronics products. With these favourable external environments, coupled with the strengthening in the growth of domestic-oriented industries, the contribution of the manufacturing sector to GDP growth is expected to increase.

		CHANGE (%)			SHARE OF GDP (%)	
	2003	2004 (Preliminary)	2005 (Forecast)	2003	2004 (Preliminary)	
GDP	5.3	7.1	5.0 - 6.0	100.0	100.0	
Agriculture	5.7	5.0	3.3	8.7	8.5	
Mining	5.9	4.1	5.0	7.2	7.0	
Manufacturing	8.3	9.8	4.5	30.8	31.6	
Construction	1.9	-1.9	-1.0	3.2	2.9	
Services 4.4		6.7	5.7	57.6	57.4	

Figure 2: Real GDP Contributors by Sector in Malaysia (% change).

Source: Bank Negara Malaysia Annual Report 2004

The manufacturing sector, along with the services sector, are the main engines of growth in 2004 and they expect to follow on in 2005. Growth in the manufacturing sector is projected to expand further to around 10.5% in 2004, up from 8.3% recorded in 2003. This is mainly supported by the pick up in the global electronics industry and improved domestic demand. The latest indicators suggest that an upturn in the global semiconductor cycle is encouraging. The expansion in the electronics industry would be driven mainly by the wireless and personal computers PC markets, due to rising demand for wireless applications as well as the PC replacement cycle, as companies invest again following their huge spending prior to the Y2K period. This would be supplemented by the demand for consumer electronics like camera phones, digital video disc players and game console. Meanwhile, in the domestic-oriented industries group, growth will be supported by improved demand for motor vehicles and the expansion in the construction-related materials industries. With these favourable external environments, coupled with the strengthening in the growth of domestic-oriented industries, the contribution of the manufacturing sector to GDP growth is expected to increase.

While improving global and regional economies had lifted export growth, the economy also got a lift from household spending and government consumption. However, private investment is also expected to pick up. This is expected to sustain economic growth momentum and allow the Government to slowly ease off its economic stimulus measures. Private investments showed an up-cycle while stronger loan applications and higher investment approvals, particularly in the manufacturing sector, pointed to expanding business activities going forward.

However, according to the Malaysia Economic Report 2004/2005, the country's economic growth is expected to moderate to 6% in 2005 due to high oil prices, inflationary pressures, possible increase of interest rate, and a probable slowdown in the PRC's economy. Nonetheless, Malaysia's strong domestic demand and broad-based growth will support the country's GDP growth, with services and manufacturing being the twin engines of growth.

(Source: IMR and Summary of IMR)

#### 4.6.3 **Malaysian Manufacturing Industry**

The manufacturing industry in Malaysia, particularly the electronics has been the primary growth drivers of the local metal stamping industry. This is in view of its contribution towards the consumption parts and components for the manufacturing of electronics products, particularly in consumer electronics products. On the other hand, the automotive industry has been the primary growth driver of the local hot forging industry. Figure 3 below illustrates the real GDP versus the growth rate of the manufacturing industry in Malaysia for the years 2001-2004.

Malaysia (% change)

Figure 3: Real GDP Versus the Growth Rate of the Manufacturing Industry in

Year	Real GDP (%)	Growth rate (%)
2001	0.3	-5.8
2002	4.1	4.0
2003	5.3	8.3
2004 <i>e</i>	7.1	9.8
2005f	5.0 - 6.0	4.5
		- Estimate f Esure

e - Estimate f - Forecast

Source: Bank Negara Malaysia Annual Report 2004

In 2003, output growth in the manufacturing industry gained momentum especially in the second-half of the year, following the broad-based recovery in the global economy and strengthening domestic demand. Manufacturing production growth is expected to strengthen to 9.8% in 2004, as compared to 8.3% in 2003, with expansion across a wide range of products in both the export-oriented and domestic-oriented industries. However, the manufacturing industry is forecasted to grow slightly slower in 2005 to 4.5% as demand for electronic products tapers in the global semiconductor cycle.

The growth in the manufacturing industry is mainly driven by the pick up in the global electronics industry and improved domestic demand. The expansion in the electronics industry would be driven mainly by the wireless and PC markets, due to rising demand for wireless applications as well as the PC replacement cycle. Increased flow of investments also contributed positively as investor confidence gradually regained momentum. The strong growth in consumer electronics was mainly driven by a strong consumer interest in adopting new technology and multi-functional devices like camera phones, personal digital assistants (PDAs) and digital video decoders (DVDs). Consequently, the metal stamping industry is set to grow in tandem with the electronics industry.

Malaysian manufacturers, due to their diversity in product mix and export markets are expected to benefit from the emerging global electronics up-cycle. Strong demand for commodities, semiconductors and chemical products, especially from South Korea, the PRC, and the US are set to boost Malaysian manufacturing exports for electronics products. Overall growth has been further helped by an improvement in demand from the European Union. Higher global demand for electronics products have resulted in an increase in growth for the electronics sector from 15.1% to 24.9% in 2003 and 2004 respectively. The increase in growth change for electronics industry under the manufacturing sector in Malaysia for the period 2002-2003 is as shown in Figure 4 below.

	2002	2002	2004
	2002	2003	2004
Value added			
(Constant at 1987 price)	4.0	8.2	9.8
Overall Production	4.5	10.5	12.6
Export-oriented Industries	5.0	11.9	14.1
of which:			
Electronics	13.4	15.1	24.9
Electrical products	-5.1	-7.0	-9.8
<b>Chemicals</b> and Chemical Products	2.7	20.8	14.1
Wood and wood products	-6.0	0.9	12.5
Textile and wearing apparel	-6.2	-2.2	-11.9
Off-estate processing	7.1	11.8	4.0
Rubber products	2.0	18.7	14.8
Domestic-oriented industries	3.4	6.1	7.1
of which:			
Construction-related products	3.8	10.2	N/A
Fabricated metal products	0.8	7.4	29.0
Food products	8.7	8.8	3.6
Transport equipment	6.2	-5.5	8.3
Petroleum products	-4.1	2.3	1.3

Figure 4: Real GDP Contribution by the Manufacturing Sectors in Malaysia (% change).

Source: Bank Negara Malaysia, 2004

The encouraging projected growth for the manufacturing industry, particularly the electronics industry, indicates a positive trend ahead for the metal stamping industry in Malaysia. The industry is expected to benefit from rising manufacturing activities resulting from strong global demand coupled by rising consumer interest in electronics products.

On the other hand, the hot forging industry is a major supporting industry to the automotive industry. The automotive industry is also one of the major contributors to Malaysia's GDP. Due to its importance, the Malaysian government is continuously developing this industry by encouraging strategic alliances with global automotive and components manufacturers to achieve world-class standards and capabilities. This industry had registered positive sales growth every year since the economic crisis in 1997. In 2003, the Malaysian vehicle sales had increased about 6.9% to 405,010 units. Nevertheless, this figure is expected to increase by another 5%–7% in 2004 as there are many car buyers holding back motor vehicle acquisitions in 2003, due to price reduction expectations in the new tariff announcement in view of AFTA (ASEAN Free Trade Area) in 2005. However, lower than expected reduction in car prices post-AFTA gradually fuelled car acquisitions again. The aggressive launching of new car models coupled with low financing between 3%–5% for new cars had also helped boost car sales.

Growth in the Malaysian economy in 2004 was broad-based across all industries, with the strengthening growth in the manufacturing and services industries identified as the key contributors. The expansion was supported by stronger growth in export-oriented industries and sustained growth in domestic-oriented industries. The growth reflected stronger external demand, the improving domestic demand and continued recovery in the investment cycle.

Malaysia's robust economic activity, coupled with the need to establish competitive small-scale and medium-scale industries that will strengthen inter-industry and intra-industry linkages in the economy, as well as the intensifying efforts at product and market promotion to sustain and enhance Malaysia's exports in the global market under the 8<sup>th</sup> Malaysian Plan ("8MP"), are expected to further boost the growth of the metal stamping and hot forging industries.

(Source: IMR)

### 4.6.4 Metal Stamping Industry

Malaysia's engineering support industries include the mould & die industry, metal stamping industry, casting industry, heat treatment industry, plating/surface treatment industry and machining industry, have developed rapidly over the past three decades in tandem with the overall growth of the country's manufacturing industry. The metal stamping industry generally reinforces the assembly and production of completed products through the supply of vital metal parts and components by a diversified range of metal forming techniques. This industry is regarded as one of the most important and significant GDP contributors to the Malaysian economy due to its crucial role to the manufacturing industry, particularly the electronics industry – which remains as one of the key driving forces behind Malaysia's GDP.

The metal stamping industry in Malaysia, through its web of over 300 companies, engages in providing vital support to the domestic manufacturing industries. The main manufacturing industries include the electrical & electronics and automotive industries. Some of the main products supplied include casings, precision parts for consumer electronics, computers and peripherals, audio and visual equipments, automotive parts, and office equipments. Given its symbiotic relationship, the metal stamping industry grows in tandem largely with the electrical and electronics industries in Malaysia – and there have been encouraging indications of a positive correlation with the growth in the automotive industry as well.

The electronics industry in Malaysia is the largest contributor to the Malaysian economy in terms of export earnings, manufacturing output and employment creation. In 2003, it is estimated that there are more than 900 companies involved in the electronics industry employing 360,048 workers with the value of exports of RM199.5 billion. The overall scenario of the Malaysia's electronics industry in 2003 is as depicted in Figure 5.

Number of companies	>900
Output	RM147.1 bil
Electronic Components	68.1%
Consumer Electronics	19.5%
Industrial Electronics	12.8%
Average Annual Growth, 1993 – 2003	15.8%
Employment	Approx. 360,048
Exports	RM 199.5 bil
Electronic Components	RM95.2 bil
Consumer Electronics	RM19.7 bil
Industrial Electronics	RM84.5 bil
T I	DN (140 71 1
Imports	KM148.7 bil

Figure 5: Malaysia's Electronics Industry in 2003

Source: Malaysian Industrial Development Authority, 2004

The electronics industry in Malaysia comprises three major sub-sectors; namely electronics components, consumer electronics, and industrial electronics. In 2003, the share of the electronics components sector was estimated at 68.1%, while the share of consumer electronics and industrial electronics registered approximately 19.5% and 12.8% respectively as shown in Figure 6. The consumer electronics sector contributed RM19.7 billion of total electronics exports in 2003. Major products include audio products, video CD players, colour televisions and video cassette players/recorders, digital video disc (DVD) players, video cameras and electronic games console. The metal stamping industry plays a major role in providing support for the manufacturing of these consumer electronics products.



Figure 6: Sub-sectors of Malaysia's Electronics Industry (%), 2003

Source: Malaysian Industrial Development Authority, 2004

According to Malaysia's Economic Report 2004/2005, Malaysia is in line to experience GDP growth of as much as 7% this year, marginally more than the original estimation of 6%-6.5%. Over a year ago, it is observed that the manufacturing operations have rebounded, posting an 11% gain. Moreover, market liberalisation steps taken by the Malaysian Government recently allows 100% foreign ownership of manufacturing plants in Malaysia. Export-oriented industries contributed slightly more than half of the total manufacturing output, and the biggest contributor so far remained the electronics industry, despite posting a lower growth in the first half of 2003.

Despite the overwhelming contribution from the electronics industry to GDP, the significance of the automotive industry cannot be neglected. After having registered positive sales growth annually since the economic crisis in 1997, Malaysian vehicle sales plummeted 6.9% to 405,010 units in 2003. This was in contrast with the strong performance in 2002 where vehicle sales were 434,954 units – a growth of 9.7% over 2001 sales total of 396,381 units. The main reason for the decline in vehicle sales is mainly due to consumers holding back purchase of cars in expectation of price reduction in the new tariff announcement in view of AFTA (ASEAN Free Trade Area) in 2005. However, growth in 2004 is expected to expand by 6%–8% to about 437,000 units, as shown in Figure 7 because consumers that have earlier held back their purchases are expected to proceed with their planned acquisitions realizing that AFTA does not result in significantly lower priced vehicles. Additionally, the combining factor of the aggressive launching of new car models in the likes of Honda City, Toyota Vios and Hyundai Elantra coupled with low financing costs have helped boost car sales.



Figure 7: Malaysian Vehicle Sales Forecast, 2004 - 2008

Source: Malaysian Automotive Association, 2004

The growth in the Malaysian metal stamping industry has accelerated in tandem with the overall growth of the manufacturing industry for the past three decades, resulting from increasing volume of locally manufactured parts and components to meet domestic and global demand. The expansion of the electronics industry in Malaysia and its sectors; namely consumer electronics, computers and computer peripherals, and telecommunication equipment, along with the expansion of the automotive industry has greatly boosted demand for metal stamping products.

The product life cycle of electronics products is also increasingly becoming shorter. As new products are being launched rapidly, coupled with aggressive product marketing to penetrate new markets and gain market share, the need for supporting industries such as metal stamping is expected to grow in tandem. Moreover, current import level of metal stamped products (parts and components) indicates that the market potential has yet to be fully realised by the local metal stamping manufacturers.

(Source: IMR)

### 4.6.5 Hot Forging Industry

Hot forging industry is also an established industry in Malaysia. Forging is a manufacturing process that is carried out in a hot environment where metal is pressed, pounded or squeezed under great pressure into high strength parts or components. The most common metals used in this process include carbon steel, stainless steel, aluminium, titanium, brass, and copper. Nevertheless, the type of metal used varies with the different type of forging – open die forging, closed die or impression forging, and seamless rolled ring forging.

The hot forging industry supports many dependent industries, such as the automotive, aerospace, ordnance/shipbuilding, valves & fittings, and hand tools & hardware industries. The importance of the hot forging industry is primarily due to its unique metal forming ability to form or shape metal which may not be achieved using other metal forming methods, such as metals with strong attributes. Hence, hot forging is normally deployed for parts and components where reliability, strength and human safety are critical as it can produce directional alignment for important directional properties in strength, ductility and resistance to impact and fatigue.

Hot forging is a relatively fragmented and specialised industry. The hot forging industry reflects a monopolistic to oligopolistic nature, depending on the type of product market. The key players identified are George Kent (M) Bhd ("George Kent"), Unique Forging & Components Sdn Bhd (a subsidiary of BSL Corporation Bhd) ("Unique"), AE Systems Manufacturing (M) Sdn Bhd (a subsidiary of Kris Components Bhd) ("AE Systems"), and Master Shanghai Turnparts Sdn Bhd. George Kent is the contracted sole provider of water meter parts/components in Malaysia. Frost & Sullivan has identified Unique Forging and AE Systems as the leading hot forging players for the brass products market in Malaysia, both commanding a market share of 7% and 6% respectively.

(Source: IMR)

#### 4.6.6 Industry Players and Competition

The metal stamping industry in Malaysia is a highly fragmented industry and comprises of many players. Hence, the identification of leading one-stop metal stamping solution providers researched by Frost & Sullivan in this report does not constitute, and is not limited to, the actual quantity of leading players present in this industry in Malaysia. These metal stamping players supply metal stamped parts and components for the needs of several major industries including electronics, automobile and machine building. There are over 300 companies engaged in various types of metal stamping activities in Malaysia of which an estimated 80% cater specifically to the electronics industry.

The metal stamping industry in Malaysia comprises many players. Due to its fragmented nature, capturing an accurate market share amongst the metal stamping companies remains a challenging task. Nevertheless, the leading one-stop metal stamping solution providers for the electrical & electronics industries that have substantial market presence in Malaysia are identified as listed, but not limited to, in Figure 8.

Companies	Revenue <sup>1</sup> (RM'mil)	Year	Estimated Market Share <sup>2</sup>
AE Technology Sdn Bhd <sup>3</sup>	270	2003	28%
CS Metal Industries (M) Sdn Bhd	153	2002	16%
Kein Hing Industry (M) Sdn Bhd	98	2004	10%
Jotech Holdings Bhd	76	2003	8%
Seksun Technology Sdn Bhd	76	2003	8%
BSL Corporation Bhd	72 4	2004	8%
Tekun Asas Sdn Bhd	44	2002	5%
Wong Engineering Sdn Bhd	44	2002	5%
Atlan Holding Bhd	37	2003	4%
Kobakin (M) Sdn Bhd	33	2003	3%
Others <sup>5</sup>	45		5%
Total	948		100%

Figure 8: The Leading One-Stop Metal Stamping Solution Providers for the Electrical & Electronics Industries in Malaysia

Source: Frost & Sullivan, 2004

#### Notes:

- <sup>1</sup>*Revenue figures based on latest available information as depicted in "Year" column*
- <sup>2</sup> Estimated market share based on latest available revenue figures
- <sup>3</sup> 100% metal stamping subsidiary of Kris Components Bhd
- <sup>4</sup>*Revenue contributions by metal stamping and PCB assembly operations only*
- <sup>5</sup> Estimated revenue on other one-stop metal stamping solution providers in Malaysia

Figure 9 indicates the graphical representation of the leading one-stop metal stamping solution providers.

Figure 9: The Leading One-Stop Metal Stamping Solution Providers for the Electrical & Electronics Industries in Malaysia



Source: Frost & Sullivan, 2004

The metal stamping industry is an established industry and the players in the market are always competing with one another to provide the metal stamped products and services of the highest quality to the original equipment manufacturers ("OEM").

One-stop metal stamping solution providers have a competitive edge over traditional single metal stamping operations. Apart from the provision of integrated metal stamping services, technical expertise is also required to progress in this industry. This ability is crucial as the electronic products are getting increasingly unique and high-tech. Aggressive product launches and market penetration strategies by the OEMs add pressure to the players. With the constant upgrading of technical expertise, the one-stop metal stamping solution providers would be able to meet these demanding requirements from its customers to remain competitive.

Retention of skilled and experienced staff is also crucial in this industry as it provides a competitive advantage over other players. This ability will save the company from having the need to train new staff and prevent leakage of technical knowledge to other competitors whenever they lose a key staff.

Company No. 651118-K

### 4. INFORMATION ON THE BSL GROUP (Cont'd)

An established industry such as this also requires a good track record and established relationships with the OEMs. These requirements become more important ever since the products lead time are shorter and the OEMs adopted the Just-In-Time (JIT) manufacturing concept. In the JIT practice, OEMs would try to keep the minimum stock level in their warehouse. Hence, OEMs will not have the luxury to try out some new players and risk themselves not meeting the deadline of production due to various possible reasons, such as late delivery and product defects.

Finally, being able to become a one-stop metal stamping solution provider will also give the metal stamping company a niche over its competitors who do not possess this capability. The benefits of having this capability are listed below:

Better customer loyalty and customer satisfaction Being a one-stop metal stamping solution provider will save the customer from having the hassle to look for other companies to design the mould and assemble the product. Hence, this will create customers' satisfaction, which in turn will create customer loyalty.

#### 

Involvement of one-stop metal stamping solution providers from the initial stage to the final stage will enable them to control the overall production which will enable the company to control the product quality.

#### **○** *Ability to reduce production lead time*

Time used for transportation of work-in-progress (WIP) products, sourcing from other manufacturers and meeting different manufacturers would be reduced as the whole production process from the design of the mould to the assembly would be carry out under one group.

Ability to charge a lower price and able to make profit
 Integrated one-stop metal stamping solution providers offer customers with fewer channels/parties
 to approach coupled with the reduced transportation/movement of WIPs will result in lower cost
 for the customers.

#### **I** In line with current industry expectations

As the industry grows, there will be increased competition. Being a one-stop metal stamping solution provider helps metal stamping companies to remain competitive in the industry – and hold a competitive advantage over the traditional single metal stamping operators.

In Malaysia, hot forging is a relatively fragmented and specialized industry. Identification of leading hot forging players for brass products provided by Frost & Sullivan in this report does not constitute, and is not limited to, the actual quantity of leading players present in this industry in Malaysia. There are players who specialize in a single hot forging product or segment. Hence, the hot forging industry reflects a monopolistic to oligopolistic nature, depending on the type of product market. For example, George Kent (M) Berhad is the contracted sole provider of water meter parts/components in Malaysia (and hence, monopolises this segment of the hot forging industry). The hot forging industry also reflects an oligopolistic nature where few players provide hot forged parts/components to the automotive industry. These players include BSL Corporation Bhd. Brass is one of the common metals used in the hot forging industry due to its favourable material integrity, dimensional tolerance and surface finish.

(Source: IMR)

#### 4.6.7 Government Legislation, Policies and Incentives

The metal stamping industry plays an important role in supporting the growth and development of the manufacturing industry in Malaysia, particularly the consumer electronics and automotive industries by supplying the necessary metal stamped parts required for mass production. The Malaysian Government's plans and efforts to place Malaysia in the global map as one of the leading global manufacturers can only materialise with strong foundation from the supporting industries.

Future prospects for the metal stamping industry in Malaysia is encouraging as the Government has, under the 8MP, placed continuous emphasis on the development of the supporting roles and utilities to facilitate the growth of other industries, particularly the manufacturing industry. This growth would contribute approximately 32% to the share of GDP by 2005, based on the 2004/2005 Economic Report. The main contributor to this growth would come from the electronics industry and this industry will continue to be the major contributor to Malaysia's export. Further, the automotive industry in Malaysia is also expanding fast – to experience double-digit growth in vehicle sales unit year-on-year of approximately 23%. This is in line with the Government's plans and efforts to develop the local supporting industry and encourage local consumption and manufacturing of parts and components. The evolution of the metal stamping industry, both domestically and globally, into one-stop metal stamping solution providers has elevated the industry into a new level of value-chain and sparked a new level of competitiveness amongst players (as well as barriers of entry) in the industry.

The Government has also promoted foreign direct investment (FDI) into the supporting industries through tax incentive promotions. The tax incentives are given by ways of Pioneer Status and Investment Tax Allowance ("ITA") to the following sub-sectors and products by MITI for the promotion of FDIs. Eligible new projects in the metal stamping industry include:

- Manufacturing of machinery and components thereof
- Manufacturing of transport equipment, and components and accessories thereof
- Supporting industries and products thereof
- Manufacturing of electrical and electronics equipment, and parts and components thereof

Furthermore, in the 2005 Budget Proposals, companies which had previously claimed Pioneer Status and ITA are allowed to make a second round claim if they relocate their manufacturing activities to the promoted areas. The Government announced that the allocation of an estimated RM2.5billion for East Coast Peninsular Malaysia and RM3.8billion for Sabah and Sarawak for the development of the manufacturing industry. Hence, this incentive is expected to spur existing and new investors to this industry.

(Source: IMR)

#### 4.6.8 Demand and Supply Conditions

The metal stamping industry supplies metal-formed parts and components to a wide range of industries such as electrical & electronics, automotive, and machinery & equipment. Over the years, this industry has acquired the capacity and technical capabilities to serve the various market needs of multinational corporations in various industries for both the domestic and export markets. The growth of the metal stamping industry is expected to grow in tandem with the increasing demand, both domestically and globally, for electrical & electronics products as well as automotive parts and components.

Figure 10 shows the relationship between the production and sales of the stamped and pressed metal products for the years 1999 to 2003. The decreasing trend in production and sales over the years was mainly due to the migration of some users to the PRC – with competitive (lower) pricing as the main attractive force. Lower pricing is made possible by the cheaper costs of capital and production (mainly labour). In 2003, it is noted that the incremental decrease in the sales value is marginally higher than the incremental decrease in the sales volume. This is likely due to the price competition among the local and foreign players. As metal stamping is an established industry, players resort to competitive pricing to remain competitive. Despite a decreasing trend in production and sales, the demand for

stamped and pressed metal products are expected to pick-up as a result of both the overheated economy in the PRC and the encouraging growth charted by the dependant industries, especially the electrical & electronics industry and the automotive industry.

Year	Production Quantity ('mil number)	Incremental Increase / (Decrease)	Sales Quantity ('mil number)	Incremental Increase / (Decrease)	Sales Value (RM'mil)	Incremental Increase / (Decrease)
1999	1,348	-	1,316	-	832	-
2000	1,794	33%	1,722	31%	1,150	38%
2001	1,890	5%	1,726	0%	1,163	1%
2002	1,876	(1)%	1,808	(5)%	1,099	(5)%
2003	1,845	(2)%	1,808	0%	1,015	(8)%

Figure 10: Production of Stamped and Pressed Metal Products

Source: Department of Statistics of Malaysia, 2004

The demand for consumer electronics goods is expected to increase in tandem with the expansion of the global electronics industry. Recent turnarounds in global demand for consumer electronics goods and automotive parts/components have been encouraging. Heightened demand for consumer electronics coupled with the recent market liberalisation of the domestic automobile industry under AFTA, are expected to boost demand for metal stamped parts and components.

The forging industry in Malaysia is an established industry. Nevertheless, there is still growth potential for the industry, due to presence of growth in its dependent industries such as automotive, aerospace, ordnance/shipbuilding, valves & fittings and hand tools & hardware industries. For example, in the automotive industry, cars and trucks may contain more than 250 forged components. These forged components are commonly found at points of shock and stress such as wheel spindles, kingpins, axle beams & shafts, torsion bars, ball studs, idler arms, pitman arms and steering arms. Hence, with growth in the demand of these industries, coupled with globalization and market liberalisation efforts, this will boast the demand for forged parts and components.

(Source: IMR)

### 4.6.9 Substitute Products and Services

Plastics are substitutes for metal parts or components. This is due to plastic's compound characteristics which offer adaptability, flexibility, rust-free, and tensile strength, especially when very clear outline moulding or high-precision is required. Plastics type ranges between the usability and characteristics required for a given product's utilization, since varying plastic types pose different compound fundamentals which determine the degree of its usability. However, due to its flammable nature, plastics are not used for products which are utilized under high temperature atmosphere or requirements. Therefore, there remains a dominant market for metal formed parts or components that require high temperature tolerance and solid structure/strength.

Fibre glass also poses as a competitive replacement for metal products. Despite its solid and compact nature, fibre glass is not widely viewed as in the ideal substitute for metal parts or components because of its price. Again, the question on fibre glass materials ability to withstand high-temperature atmosphere remains a challenge to be an ideal substitute for metal.

Generally, there is no direct substitute to the forging of parts and components through hot forging. Forged parts and components which reflect attributes of high temperature/heat tolerance and strong structure properties are usually attained through hot forging process. This can only be achieved through the hot forging process.

(Source: IMR)

#### 4.6.10 Prospects and Outlook of the Industry

In the era where technological advances and evolving trends are occurring at a rapid rate and product life cycle is getting shorter, it has become a critical mission to get new products to the market as quickly as possible through aggressive product marketing and launches. First-to-market concept has become imperative to remain competitive for the OEMs. This means that the role of one-stop metal stamping solution providers has become even more vital to the competitive growth of manufacturers, particularly in the electronics and automotive industries. Both these industries need a reliable supporting industry that can effectively supply the needed parts and components.

Under the 2004/2005 Economic Report, the manufacturing industry is estimated to contribute 31.8% in 2004 and is forecasted to contribute 32.3% in 2005 to the share of GDP. Nevertheless, manufacturing has become more complex and time sensitive. Hence, businesses require reliable suppliers that can supply high quality materials without delay so that this would not interrupt or delay scheduled production lines. Product and technology life cycles are becoming shorter, hence there is a need to fully exploit the relatively short market window before competition for new products emerges. Therefore, there is extreme pressure on companies to be reliable and adopt a value chain operation that can be cost-effective and price competitive. One-stop metal stamping solution providers offer such requirements.

In the metal stamping industry, there is great potential to tap further into the automotive market. Currently, there are more than 350 automotive manufacturers in Malaysia and this poses a great opportunity for the metal stamping industry to capture this market segment. Increasing, locally manufactured and assembled vehicles will also contribute to the industry's growth. This would directly pose a demand for the automotive metal stamped parts from the local one-stop metal stamping solution providers in the market – which is in line with the Malaysian Government's encouragement to support local manufacturing and supporting industries. Consumer demand for cars will continue to grow strongly over the medium term, at an average annual rate of approximately 6.0% from 2004 to 2007. Chart 11 indicates Malaysia's increasing global trade over the years. This should be a boon to both the manufacturing and supporting industries.



Chart 11: Malaysian Trade with the World 1992-2002

Source: MATRADE, 2004

Malaysia's improved economic performance of 2003 has created favourable conditions for further growth in 2004. GDP growth is forecast to increase with strong export demand and private consumption projected to counteract the planned decline in government spending. The real GDP is expected to expand by 7% in 2004 compared to 5.3% in the previous year. With the world economic growth expected to strengthen further in 2004, this will create a good demand for consumer electronics as well as automotive goods.



Chart 12: World GDP Growth vs Malaysia Real GDP Growth

Source: World Bank and BNM Report, 2003

Chart 12 indicates the annual growth in tandem between World GDP and the Real GDP of Malaysia for the actual period of 2002-2003 and estimated growth for the year 2004. The encouraging GDP growth, both globally and for Malaysia, indicates bright prospects for the metal stamping industry in Malaysia. The growth, spurred by an increase in manufacturing activities and international trade, will have a positive spill-over effect on the industry as a whole. Coupled with the encouraging support and promotion undertaken by the governments to develop the supporting industries, and the emphasis on the inflow of foreign funds and retention of domestic funds by the Malaysian Government, this can only translate into positive signs for the local one-stop metal stamping solution providers.

With the recent encouraging announcement by BNM on Malaysia's second quarter growth results, there are positive indications that prospects for higher growth in 2004 will propel further. The prospects for higher growth in 2004 are largely contributed by the favourable developments in the global economy, reinforced by a strong domestic economy. Expansion in the US economy has been stronger than expected and prospects remain favourable. The sustainability of the recovery in the US appears to be more entrenched. Current indicators point to robust growth and sustainability in economic expansion in Japan, while continued expansion in consumption and investment are expected to support growth in the Europe area. Growth for the regional economies has been revised upwards, amidst robust intra-regional trade following the strong upturn in global electronics and automotive industries, coupled with a stronger expansion in aggregate domestic demand.

Developments over the years indicated that the metal stamping industry in Malaysia has gradually evolved from the traditional single metal stamping operations to an integrated "One-Stop Metal Stamping Solution Providers". Moving up the value chain, one-stop solution providers have also expanded their operational capacities to include metal mould fabrication, and other additional value-added service, such as post-stamping inspection, assembly, and packaging. This resulted in the increased competitiveness of the players in the metal stamping industry to continuously provide a higher level and quality of services, as well as the provision of value-added services. The gradual evolution has led to the rise of only few distinguished players with the ability and capacity to meet the increasing demands of the metal stamping industry. PCB assembly has also become an important value-added service to the one-stop metal stamping solution providers, especially those serving the electronics industry.

While forging is by no means the optimum process for the production of every part, it is ideally suited to applications that require very high quality, special sizes, restricted mechanical properties or critical performance specifications. In many situations, parts may require directional strength or impact resistance achievable only through forging.

Size is often a critical factor in the selection of the forging process. Many shapes, including contoured rings, hubs, spindles and hollows, are difficult to get from non-forging suppliers. And when buyers need a highly cost-effective part solution, forging can reduce material and machining costs while improving final part quality.

The forging industry in Malaysia is an established industry. The hot forging industry has shown much resilience over the years by playing an important role catering for the other growing industries (such as the automotive, shipbuilding, and tools industries). Their importance as a supporting industry has magnified over the years with the rapid expansion and growth of the dependant industries in Malaysia (especially the automotive industry). The hot forging process boasts a unique metal forming ability to form or shape metals which may not be achieved using other metal forming methods – especially for metals with strong attributes and unique shapes – which can only be achieved effectively using the hot forging process.

The hot forging industry in Malaysia is expected to grow in tandem with the growing dependant industries – especially the automotive industry which has been experiencing exponential growth since the economic crisis in the late 1990s. This encouraging outlook is expected to boost the prospects of the leading hot forging players in Malaysia.

Moving forward, the economic recovery and growth in the electronics industry provide encouraging prospects ahead for the metal stamping industry (and demand for PCB) in Malaysia. The expected growth in the automotive industry is also expected to boost the demand for hot forging parts and components. All these factors are expected to favour one-stop metal stamping solution providers with both PCB assembly and hot forging services as complimentary value added services.

(Source: IMR)

#### 4.6.11 Industry Reliance on and Vulnerability to Imports

The growth in the Malaysian metal stamping industry has accelerated in tandem with the overall growth of the manufacturing industry for the past three decades, resulting from increasing volume of locally manufactured parts and components to meet domestic and global demand. The expansion of the electronics industry in Malaysia and its sectors; namely consumer electronics, computers and computer peripherals, and telecommunication equipment, along with the expansion of the automotive industry has greatly boosted demand for metal stamping products.

The product life cycle of electronics products is also increasingly becoming shorter. As new products are being launched rapidly, coupled with aggressive product marketing to penetrate new markets and gain market share, the need for supporting industries such as metal stamping is expected to grow in tandem. Moreover, current import level of metal stamped products (parts and components) indicates that the market potential has yet to be fully realised by the local metal stamping manufacturers.

In Malaysia, forging plays an important role as a supporting industry to many dependent industries, such as the automotive, aerospace, ordnance/shipbuilding, valves & fittings, and hand tools & hardware industries. The importance of the forging industry is primarily due to its unique metal forming ability to form or shape metals which may not be achieved using other metal forming methods – such as metals with strong attributes, and shapes which can only be effectively achieved using the forging process.

Any slowdown in global economy will inevitably affect the balance of demand and supply of regional economies. Consumption and demand for manufactured goods will decline, followed by lower outputs in the global manufacturing industry. The result will lower international import and export activities. Nevertheless, this restraint will affect all industries in the global market.

(Source: IMR)

#### 4.7 MAJOR CUSTOMERS

Major customers of the BSL Group for the seven (7)-month financial period ended 31 March 2005 are as follows:

			% contribution	Length of relationship
	Name of customer	Country	to total sales	(Year)
1	JVC Electronics (M) Sdn Bhd	Malaysia	24.67	17
2	Panasonic AVC Networks Kuala Lumpur (M) Sdn Bhd	Malaysia	9.73	16
3	Samsung Electronics (M) Sdn Bhd	Malaysia	9.16	5
4	JVC Video (M) Sdn Bhd	Malaysia	8.79	11
5	Matsushita Electric Co. (M) Bhd	Malaysia	8.67	6
6	Panasonic Compressor Malaysia Sdn Bhd	Malaysia	7.10	16
7	Panasonic HA Air-Conditioning (M) Sdn Bhd	Malaysia	6.19	27
8	Hitachi Electronic Products (M) Sdn Bhd	Malaysia	4.24	5
9	Sony EMCS (Malaysia) Sdn Bhd	Malaysia	3.22	2
10	Unique Diamond Sdn Bhd	Malaysia	3.05	3

The top five (5) customers of the Group contributed more than 60% to the total revenue of the Group for the seven (7)-month financial period ended 31 March 2005. Three (3) of these customers have been trading with the Group for more than ten (10) years. The Group has maintained strong business relationships with its major customers because the Group has a good track record of meeting customers' stringent requirements and provision of continuous support, which enhances mutual benefit between the Group and customers. Should there be an event that products supplied to the Group's major customers are terminated, the management is of the opinion that new customers can be procured to replace the available capacity.

### 4.8 MAJOR SUPPLIERS

The Group's major suppliers for the seven (7)-month financial period ended 31 March 2005 are as follows:

	Name of suppliers	Country	% of Group purchases	Length of relationship (Year)
1	Sumiputeh Steel Centre Sdn Bhd	Malaysia	21.95	19
2	E-Metal (M) Sdn Bhd	Malaysia	7.25	16
3	Nicom Steel Centre (M) Sdn Bhd	Malaysia	6.51	19
4	Samsung Asia Pte Ltd	Singapore	6.40	2
5	Anshin Steel Services Centre Sdn Bhd	Malaysia	6.35	7
6	HK Lamination Sdn Bhd	Malaysia	6.17	3
7	Alpha Integrated Sdn Bhd	Malaysia	6.10	11
8	Kawasho Steel Processing Centre Sdn Bhd	Malaysia	4.65	12
9	Nippon Metal Services (M) Sdn Bhd	Malaysia	4.19	5
10	PCM Steel Processing Sdn Bhd	Malaysia	2.92	1

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#### 4. INFORMATION ON THE BSL GROUP (Cont'd)

The Group's MNC customers assign most of the major suppliers to the Group. Even though the Group's top five (5) suppliers accounted for more than 45% of the total Group purchase for the seven (7)-month financial period ended 31 March 2005, the management does not foresee this as a reliance on its major suppliers, as should the need arises, the Group are able to source for alternative suppliers. The Group frequently reassess its supplier portfolio, looking to diversifying its supplier base to reduce its dependency on its top suppliers.

### 4.9 FUTURE PLANS AND OUTLOOK

The future plans of BSL Group are focused in three (3) key areas, which include expansion of the Group's manufacturing facilities, horizontal and vertical diversification of its business operations.

The Group foresees that their main MNC customers will increase their production output in the short to medium term. The Group intends to capitalise on the said increase in production and the increasing trend of MNC outsourcing their manufacturing processes by expanding its current manufacturing facilities. In view of this, the Group has acquired a new factory with a land area of 2,926 square meters located in Selayang, Selangor, which is within the vicinity of the Group's current metal stamping operations to house its metal stamping and other related secondary processes. The new factory would consolidate its current operations as well as cater to future expansion. As part of the Group's plan to expand its manufacturing facilities, the Group has invested in more advanced machinery and equipments which have higher efficiency and productivity capacity.

The Group believes that there is potential for growth in the export market and has produced small and medium sized precision stamped parts and components for export to countries such as Japan and Singapore and is currently in discussions with a European procurement company to sell its products to the Scandinavia. This would give the Group an advantage over other foreign competitors as the Group has a competitive edge due to lower overhead cost incurred in the production process, which would in return reduce the cost of production.

In terms of horizontal diversification, the Group has a strong footing in brass forging and will now focus on forging of steel for automotive parts and industrial fittings that are used in all segments of the industry. In preparation to fully embark on steel forging, the Group has invested in advanced steel forging facilities to cater to its needs for production.

Going forward, the Group intends to directly and indirectly secure export orders from Japan, Australia and Singapore for its PCB and module assembly division and has entered into discussions with foreign procurement representatives for the sales of its products.