







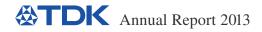
### Annual Report 2013

Financial Results



Board Members







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What is TDK's outlook for fiscal 2014?

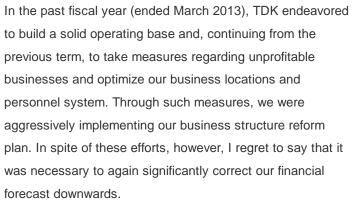


### President's Interview



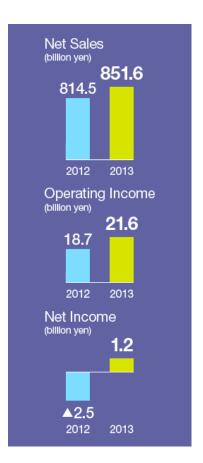
How were business results in the past fiscal year?

For the second term in a row, we had to adjust our expected earnings downwards, due to factors such as slack demand for passive components in the communications sector and stagnation in the industrial equipment sector.



One of the major reasons for this correction is the fact that sales of passive components for the communications sector fell far short of projections, as the smartphone market underwent an adjustment of supply and demand. The second reason can be seen in the stagnation of the industrial equipment market, which led to reduced demand for passive components, magnets, power supplies and similar products. As a result, net sales were down in the area of industrial equipment and some other categories. A third reason is an appraisal loss due to the fall in rare earth prices which is the main raw material for metallic magnets. In addition, the spread of smartphones and tablet devices has led to reduced sales of PCs, resulting in significantly lower demand for hard disk drives (HDDs). Consequently, business results in this market were also much lower than initially projected. As a result, our consolidated net sales for the year ended March 2013 were 851,575 million yen, with operating income of 21,648 million yen, income from continuing operations before income taxes of 18,858 million yen, and current term net income of 1,195 million yen. Average exchange rates for





the U.S. dollar and euro during fiscal 2013 were 83.03 yen



and 107.05 yen, respectively, as the yen depreciated 5.0% against the U.S. dollar and appreciated 1.8% against the euro year on year. This increased net sales by approximately 32,400 million yen and operating income by approximately 4,100 million yen.



#### How are the structural reforms progressing?

We have completed structural reforms in the passive components business as planned. In the coming term, which will be the last fiscal year of structural reform, we are concentrating on optimizing the adaptability of our business portfolio.

In fiscal 2013, we restructured the category of passive components, ceramic capacitors in particular, by optimizing production bases and creating an integrated system of production from raw material to the finished product. As a result, productivity and profitability in the sector have significantly improved, and we achieved some positive results. We will be able to draw on these experiences when optimizing our business portfolio in the coming term. In concrete terms, we intend to withdraw from the Blu-ray disc business, possibly through a sell or transfer, and will also review our product lineup in other areas as well. The optimization of production facilities, besides already announced measures, will include the consolidation of plants both in Japan and overseas, and a strengthening of business cost structures.

The budget for structural reforms in fiscal 2014 is 10,000 million yen, with expected benefits of 8,000 million yen for fiscal 2015.





### Please tell us about TDK's growth strategy for the future.

We shall promote the development of new products and new technologies targeted at accurately identified market needs, with a strong focus on expanding our presence in growth markets.



Responding to changed circumstances, and in view of the evolving business environment and technical innovation, we have reorganized our growth sector categories of Communications, Home Information Appliances, Automobiles, and Industrial Equipment and Energy into two key areas, namely "Next-generation Information and Communications" and "Energy-related."

Although the PC market is still languishing, the market for smartphones and tablet devices continues to grow, which is vital for the Next-generation Information and Communications sector. The functionality and performance of mobile devices are rising at a rapid pace, made possible by the availability of a large number of extremely small yet high-performance electronic components incorporated in these devices. The TDK Group boasts a wide lineup of products ideally suited for such mobile devices. Various types of inductors and ceramic capacitors, SAW filters that are indispensable for multiband support for several communication standards in a single device, and other high-frequency components are prime examples. Lithium-ion rechargeable batteries are also crucial parts for smartphones and tablet devices, contributing to smaller dimensions and reduced weight. The TDK Group will allocate its development, marketing, and organizational resources in a targeted manner that will allow us to capture significant businesses in these growth markets.

Due to the spread of cloud computing and related developments, the amount of information carried on the Internet is steadily increasing. This in turn results in a growing demand for data centers to store the immense data volumes involved. A single HDD such as found in a personal computer usually has two or three magnetic heads. By contrast, the type of HDD used in data centers currently has about 10 heads, expected to increase to 14 in the near future. TDK is prepared to reliably meet the increasing demand for magnetic heads for such data center applications. Furthermore, data centers are concerned about power consumption and therefore are looking towards HDDs with further increased recording density. The TDK Group is hard at work to achieve further breakthroughs in the field of recording head technology, for example by bringing thermal-assist magnetic heads closer to the product stage.



In the Energy-related category, global warming and increasingly severe energy problems are prompting us to further intensify our technological development efforts towards improving energy use efficiency, both in the automotive sector and in the power generation field.

With regard to automobiles, increasing the fuel economy of cars with internal combustion engines hinges on two key aspects: vehicle weight reduction and increased combustion efficiency. The TDK Group is contributing to both of these aims, through ground-breaking electronic components for automotive use. To name an example, ferrite magnets are used extensively in the small electric motors that energize functions such as the power windows and remote-controlled outside mirrors of a car. Through a new manufacturing technique, we were able to reduce the weight of such magnets by some 60 percent, thereby making a significant contribution to reduced vehicle weight.

Our broad lineup of products for hybrid electric vehicles (HEV) and electric vehicles (EV) includes DC-DC converters for converting the voltage of the battery, current sensors for monitoring the condition of the battery, neodymium magnets for drive motors, as well as many other electronic components that help take performance and fuel economy of next-generation automobiles to a new level.

Electronic control systems for brakes, power steering, airbags and other areas that are crucial for driving safety also require the compact and highly reliable and durable electronic components that we can supply. For such electronic control applications, we are intensively marketing capacitors, noise-eliminating common mode filters, and other products developed by us specifically for the automotive environment. In the electric power generation sector, a concept currently attracting immense interest is the smart grid. This approach applies information and communications technology to optimize the supply and demand of energy on the regional level and thereby provides a significant boost to the utilization of renewable energy sources such as solar power and wind power. The TDK Group is active in this field too, providing neodymium magnets for wind power generators, as well as passive components for power conditioners that adjust the power supply in general households. The lineup for such applications includes aluminum electrolytic capacitors, film capacitors, transformers, etc. In addition, we are also marketing electronic components for battery management systems designed for storing electrical energy in a smart grid environment.

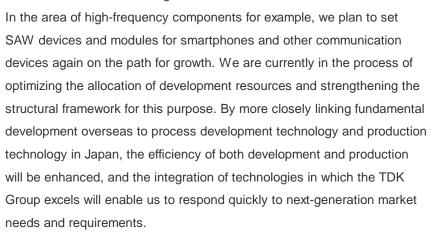




### What is the growth scenario by business segment?

We are pursuing an aggressive growth strategy centered on the passive components business.

Among our three business segments, the Passive Components category plays a crucial role, and we are bolstering this sector as a main driver of revenue growth.



With regard to inductive devices, we will expand the lineup of power coils, aiming for continued growth in the communications and automotive markets. We will also intensify the development and marketing of high frequency coils. TDK has the expertise and advanced know-how required to develop and manufacture a wide range of inductive devices, of various structural designs, using different processes. This includes wound types for large currents, multilayer types for high density mounting, and thin film types applying process technology developed for the manufacture of HDD heads. We intend to harness these advantages in technology and know-how also in future, to offer products that meet the detailed needs of customers.

Consolidation of ceramic capacitor production sites in Japan and overseas has been completed, and we expect to stabilize earnings by drawing on the effects of these structural reforms. Capacitors for automotive applications are the most important segment where we are aiming for a further expansion in sales. Lateral application of elemental technology and methods to ensure high reliability, originally developed for the automotive sector, enables us to pursue the development of application-optimized products in other areas as well. Technological know-how gained with inductive devices, together with coil and capacitor technology is being applied in a collaborative manner to the development of other products such as ultra-compact power supply modules.

In the second segment, Magnetic Application Products, we are leveraging our unique position as a manufacturer specializing in magnetic heads to





develop the recording devices business comprising HDD heads into a stable source of revenue. We are promoting the development and approval of high-performance heads for data center applications, and are accelerating the process of getting next-generation thermal-assist magnetic heads ready for mass production. We are also engaged in the development of electronic components that apply manufacturing process techniques perfected for HDD heads.

In the third segment, Film Application Products we are concentrating mainly on expanding sales of rechargeable battery related products. Efforts in this area are not limited to expanding the separators business. Rather, we are aiming to open up new business opportunities for growth by pursuing a vertically integrated business model. This encompasses the materials side through in-house development of electrode materials, and extends to cells and packaging. Application areas other than smartphones and tablet devices are also being explored.



Can you give us an outline of R & D activities with a view to the future?

Building on our strength in materials as a core technology of TDK, we are further intensifying our research and development framework oriented towards higher added value of electronic components.



Ever since the founding of TDK, originality has been a driving force. It refers to the power of creating things that are not within the grasp of other companies. This has enabled us to earn the trust of society and has allowed us to contribute things of value. Building on the core competence of the TDK Group, which is materials technology in the field of magnetics and related areas, we are concentrating on the development of products that benefit from our strengths. One of these projects is the development of rare earth free magnets. We already have developed a dysprosium free magnet which has won the approval of major HDD manufacturers for use as HDD material. Furthermore, magnets with neodymium use reduced by half and cobalt free ferrite magnets have also been successfully developed.

Research on the materials level is continuing to allow power supply units and power devices to become even more compact, low-profile, and efficient. As a new technology for next-generation energy systems such as the smart grid, we are also pursuing the development of digital power supplies incorporating intelligent functions.

Of course, research and development in the area of passive components



such as the high-frequency components that I already mentioned, as well as into next-generation HDD heads is also continuing.



#### What is TDK's outlook for fiscal 2014?

Due to growth in passive components, film application products and others, we expect net sales of 930,000 million yen.



For fiscal 2014, we are using an exchange rate of 90 yen to the U.S. dollar and 118 yen to the Euro. We anticipate a rise in sales of passive components by about 15 to 20 percent over the 379,614 million yen of the current term. Sales of high-frequency components, inductive devices, and circuit protection devices mainly for the Information and Communications market are expected to grow, and we also expect a soft recovery of aluminum electrolytic capacitors and film capacitors for industrial equipment. Sales in the automotive market should continue their steady growth.

With regard to magnetic application products, factors such as the maturation of the HDD market may lead to results ranging from leveling to a drop of about 2 percent over the 337,947 million yen of the current term. For the Film Application Products segment, an increase by some 15 to 20 percent over the 112,621 million yen of the current term can be expected, driven by increased activity in rechargeable batteries for information and communications devices, as well as in functional films.

During the current fiscal year, we have been steadily pursuing structural

reforms, but as mentioned in the beginning, we will continue to push for a growth-oriented operating base also in fiscal 2014 by reviewing our business portfolio and optimizing our production bases. We plan to allocate 10,000 million yen to the cost of structural reforms.

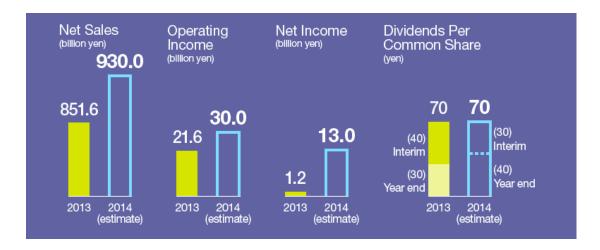
Taking all of these aspects into consideration, our consolidated performance estimates for the year ending March 2014 are 930,000 million yen in sales, 30,000 million yen in operating income, 28,000 million yen income from continuing operations before income taxes, and 13,000 million yen net income. Dividends are expected to be 30 yen per share for the first half of the term, and 40 yen for the second half, reflecting an expected recovery in earnings and amounting to a total yearly dividend of

The TDK Group now has become a truly global organization, with overseas sales making up a high percentage of total sales, and the ratio of overseas staff amounting to more than 80 percent of the entire group. The power of creativity that has pervaded the company since the beginning must be harnessed effectively throughout the entire

70 yen per share.



organization. By mobilizing management resources in every possible aspect, we intend to further enhance the efficiency and competitiveness of the TDK Group.







# Solving Noise Problems -the TDK Way

Noise problems related to electronic devices are becoming a major issue in modern society. TDK offers a wide range of effective solutions to deal with various types of noise.



In the Communications Sector



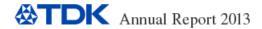
In the Automotive Sector



In the Energy Sector



In the Medical Sector



Special Feature

### Solving Noise Problems -the TDK Way

As the dimensions of electronic devices continue to shrink, their internal circuit boards are even more densely packed with a myriad of components. On the other hand, the radio frequencies used extend into the extremely high range, and the devices we use in our daily lives are increasingly exposed to various noise risks.

Regulations dealing with noise are being tightened in countries around the world, making it mandatory to implement sophisticated noise countermeasures. TDK's extensive experience with noise control technology enables us to offer a range of highly flexible and effective solutions in this field.

### In the Communications Sector

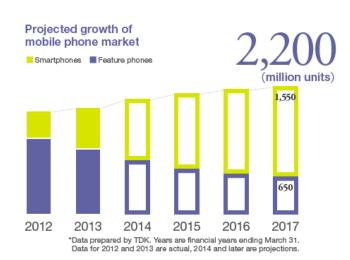
Telecommunication methods and standards are becoming more complex on a worldwide scale, requiring advanced noise countermeasures.

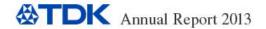


As the global mobile device market expands...

### The market for smartphones with sophisticated functions is booming!

The mobile phone market is rapidly expanding all around the world. The spread of smartphones in particular has triggered an upsurge in mobile Internet use. In order to deal with the explosive growth in data volumes, telecommunication carriers are developing and implementing next-generation communication standards such as LTE-Long Term Evolution, employing higher frequencies.





### Sophisticated LTE communications are spreading around the world.

The frequency bands used for mobile phone communication differ by country and by carrier. In recent years, as telecommunication carriers around the globe are trying to expand their range of frequency bands, there is a trend for so called multi-band support in mobile devices, allowing them to handle different communication standards and frequency bands. The spread

of LTE communications and the move towards higher frequency ranges also means that the risk of adverse effects due to noise is becoming even more of an issue.

And since smartphones are usually held in the hand and operated by touch panel, measures to protect the circuitry from static electricity discharge caused by the human body are increasingly important.

### Guarding against RF noise and static electricity is more important than ever!

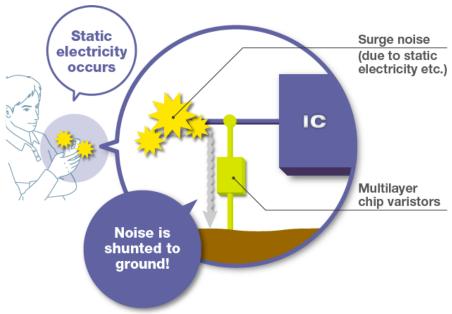
Therefore

#### For example,

### TDK multilayer chip varistors work like lightning rods!

When encountering surge noise such as caused by static electricity, multilayer chip varistors rapidly reduce their resistance value, thereby creating a bypass that routes the noise to ground and protects the other circuitry. Their function can be likened to that of a lightning rod. The devices are therefore extensively used in areas such as terminals, touch panels, as well as buttons and switches.

TDK also offers various other ways to protect mobile devices from noise, both through special technology and



dedicated products such as the proprietary flexible magnetic shield material "Flexield."



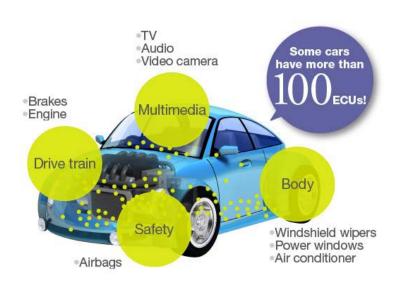
### In the Automotive Sector

As cars become more and more dependent on electronics, noise countermeasure emerges as a key factor for safety.

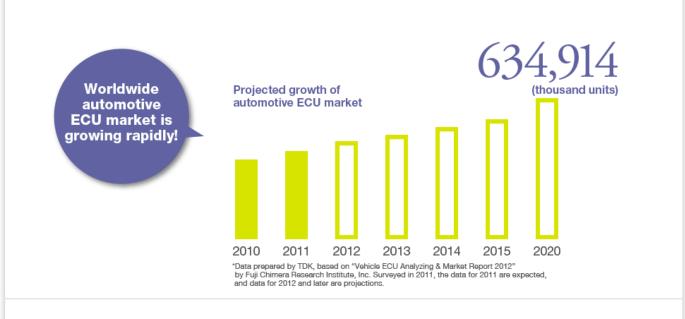
The evolution of electrical equipment in the car is steadily progressing...

### ECUs control many functions in an automobile.

Modern cars increasingly rely on electronic systems, and sometimes incorporate as many as 100 or more electronic control units (ECU). These units are linked by networks referred to as in-vehicle LANs. Unless proper countermeasures are implemented, the cables for these networks can act as antennas that radiate noise which potentially poses a risk to driving safety.



**Then** 



For highly "electrified" cars, noise countermeasures are even more essential!

**Therefore** 

#### For example,

TDK's common mode filters for in-vehicle LANs employ advanced winding technology and realize an important function!

Common mode filters are highly effective at separating electrical signals from noise, making it possible to suppress only the unwanted noise components. This is achieved by making use of the "reflection" (blocking) effect of coils. TDK's extensive know-how in magnetic materials and advanced winding technology is an indispensable asset in this area.

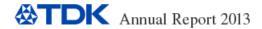
TDK also offers ring varistors for suppressing DC motor noise, clamp filters for automotive use, and many mportant function!

Common mode filters

Noise (Unwanted current)

Signal current

other effective tools for countering noise in the automotive environment.



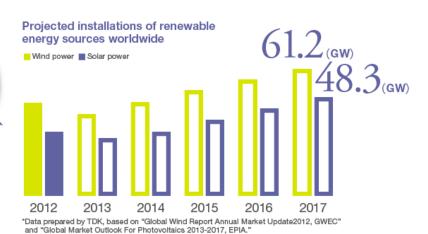


A crucial issue: how to protect electrical equipment in the home from RF noise generated during the power conversion process.



Use of renewable energy sources is spreading...





### Safe power management is a vital requirement for smart houses.

The so-called "smart house" is designed to both conserve and generate energy, and to make more efficient use of power. Power management in a smart house is handled by a power conditioner whose task is to convert the direct current (DC) power from renewable energy sources into alternating current (AC)





required by appliances in the house. This process involves a high-speed switching stage which produces radio frequency (RF) noise that can adversely affect the operation of electronic devices in or around the house. Power conditioners therefore must implement reliable noise suppression measures.

### Noise countermeasure is even more essential for power management in a smart house!

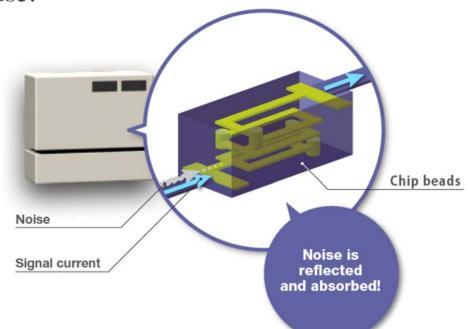
**Therefore** 

#### For example,

### TDK multilayer chip beads help to fight RF noise!

The power conditioner sits at the boundary to the power grid and is both an entry and exit point for noise. TDK offers EMC filters for power supplies, film capacitors for DC links, and various other technology solutions and products to protect electronic devices from noise.

Multilayer chip beads are highly miniaturized electronic components that selectively absorb only RF noise riding on a signal current. TDK's extensive experience with ferrite technology accumulated over many years is put into practice here.





### In the Medical Sector

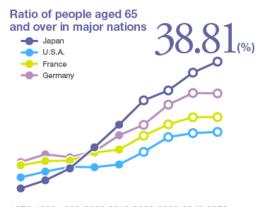
Safety and dependability are essential concerns for medical equipment. This also means flawless noise countermeasure.

#### Medical equipment increasingly goes digital...

countries have come to make use of the latest technology in the electronics sector.

#### As our society ages, the market for medical equipment is rapidly expanding.

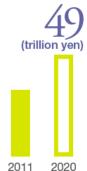
Demographic changes are happening not only in developed nations but also in emerging economies. Medical care is required by more and more people around the world, and the market for medical equipment is expanding accordingly. On the other hand, medical equipment such as imaging diagnosis devices increasingly rely on digital technology. Hospitals in many



1970 1980 1990 2000 2010 2020 2030 2040 2050 "Data prepared by TDK, based on "Ratio of people aged 65 and over in major nations" (2013 version) by National Institute

and over in major nations" (2013 version) by National Institute of Population and Social Security Research.





\*Data prepared by TDK, based on "Survey of Trends in Major Sectors" by Japan Electronics and Information Technology Industries Association.

#### c

### Compliance with stringent international standards is a necessit

Safety standards for medical equipment must conform to especially high levels, as this is an area where human life is at stake. Quality assurance standards for medical equipment such as ISO 13485 and the IEC 60601 series of standards for safety of medical electrical equipment therefore set stringent conditions that must be met on an international basis.

#### Consequently





### Noise control is also subject to strict regulations!

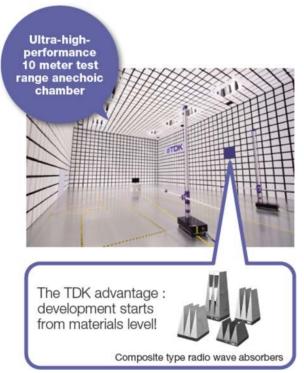
#### **Therefore**

For example,

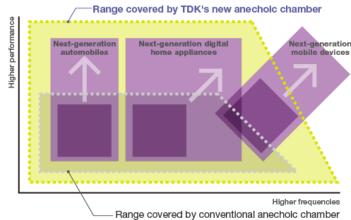
## TDK's anechoic chambers provide world-leading performance and help customer design effective noise countermeasures!



A radio wave anechoic chamber is an indispensable piece of facilities for EMC testing. As electronic devices use ever higher frequencies and are built to deliver higher performance, the demands for anechoic chamber performance also have risen accordingly. TDK has developed an anechoic chamber with a level of performance that is hardly surpassed anywhere. As a leading manufacturer of anechoic chambers, TDK is able to supply the most advanced EMC testing environments to medical equipment companies.



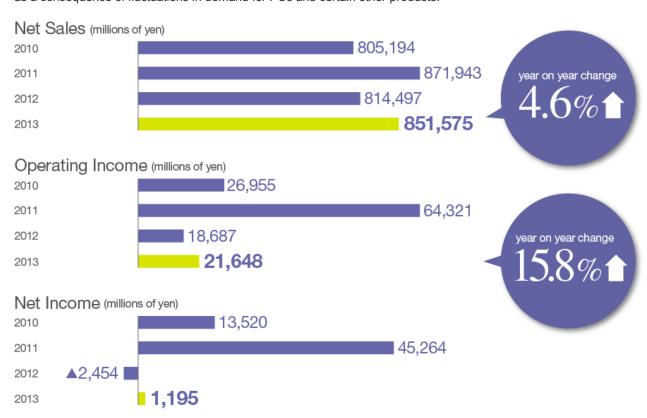
Noise can be targeted already from product development stage!





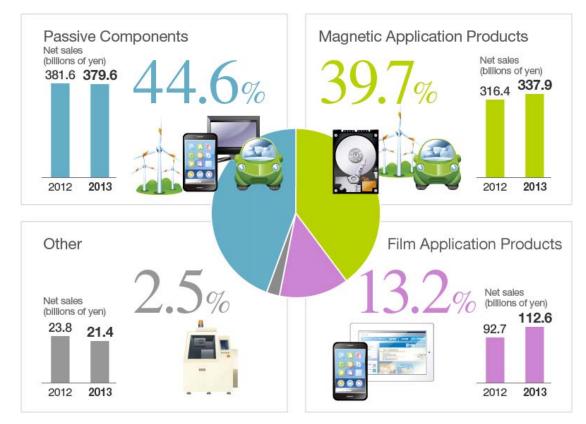
### Financial Results

For the consolidated performance of TDK, net sales came to ¥851,575 million, an increase of 4.6% from the ¥814,497 million reported in fiscal 2012, and operating income was ¥21,648 million, a 15.8% increase from ¥18,687 million in fiscal 2012. In mobile phones production, while that of conventional mobile phones declined, smartphone production grew, resulting in a slight rise over fiscal 2012 production levels for the total mobile phone market. Similarly, automobile production saw a marginal year-on-year increase for the market as a whole. This was due largely to the brisk sales performance of automobiles in the U.S., which offset the greater-than-expected sluggishness in the sales performance of hybrid cars and other visible declining factors. Meanwhile, in PC production, while that of tablet devices exceeded levels exhibited during fiscal 2012, notebook and desktop PC production fell below fiscal 2012 levels. Hard disk drive (HDD) production also fell below fiscal 2012 levels as a consequence of fluctuations in demand for PCs and certain other products.













#### Years ended March 31 or as of March 31

(millions of yen)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Net sales	604,865	655,792	657,853	795,180	862,025	866,285	727,400	805,194	871,943	814,497	851,575
(Overseas sales)	439,381	487,169	473,828	621,522	690,673	714,172	610,944	703,190	763,046	702,469	747,062
Cost of sales	459,552	476,407	484,323	585,780	622,819	635,529	605,943	614,341	654,180	634,257	676,079
Selling, general, and administrative expenses	115,569	122,875	119,886	142,052	159,106	158,921	159,878	158,976	153,442	161,715	152,287
Transfer to the government of the substitutional portion of the Employees' Pension Fund:											
Subsidy from the government			(33,533)								
Loss on settlement			27,347								
Gain on sales of business to Imation Corp.						(15,340)					
Restructuring cost	5,197	_	_	6,825	510	_	15,884	4,922	_	_	_
Production realignment cost										6,570	1,561
Realignment-related gain; Sale of properties										(6,732)	_
Operating income (loss)	24,547	56,510	59,830	60,523	79,590	87,175	(54,305)	26,955	64,321	18,687	21,648
Income (loss) before income taxes					88,665	91,505	(81,630)				
Income (loss) from continuing operations before income taxes	20,552	55,847	60,728	66,103				23,088	60,620	12,245	18,858
Income taxes	6,193	12,133	23,284	21,057	16,985	19,948	(17,041)	9,401	15,105	11,486	14,328
Income (loss) from continuing operations	13,593	43,355	36,965	44,411				13,687	45,515	759	4,530
Loss (income) from discontinued operations	1,574	1,254	3,665	310				(805)	(511)	(2,460)	_
Net income (loss) attributable to TDK	12,019	42,101	33,300	44,101	70,125	71,461	(63,160)	13,520	45,264	(2,454)	1,195



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Per common share (Yen):											
Net income (loss) attribute to TDK basic	90.56	317.80	251.71	333.50	529.88	551.72	(489.71)	104.82	350.90	(19.06)	9.50
Net income (loss) attributable to TDK diluted	90.56	317.69	251.56	333.20	529.29	551.19	(489.71)	104.74	350.57	(21.42)	5.36
Net cash flow	521.05	700.46	650.47	775.50	1,022.45	1,101.11	204.75	750.77	948.98	600.96	627.89
Net assets	4,176	4,352	4,832	5,311	5,759	5,557	4,297	4,215	4,142	3,957	4,460
Dividends per common share (Yen)	50.00	55.00	70.00	90.00	110.00	130.00	130.00	60.00	80.00	80.00	70.00
Payout ratio (%)	55.2	17.3	27.8	27.0	20.8	23.4	_	57.2	22.8	_	736.8
Total assets	747,337	770,319	808,001	923,503	989,304	935,533	1,101,036	1,091,458	1,060,853	1,072,829	1,169,642
Stockholders' equity	553,885	576,219	639,067	702,419	762,712	716,577	554,218	543,756	534,273	498,159	561,169
Working capital	315,948	360,555	379,746	397,131	449,830	300,859	281,536	286,370	199,186	219,918	232,693
Capital expenditures	41,026	44,471	61,005	73,911	70,440	84,312	98,425	64,370	78,638	99,653	85,606
Depreciation and amortization	57,132	50,726	52,806	58,540	65,337	71,297	89,567	83,392	77,264	79,918	77,938
Research and development	30,099	32,948	36,348	45,528	50,058	57,387	57,645	53,874	52,608	52,551	53,943
Ratio of overseas production to net sales (%)	55.8	58.6	59.0	61.7	62.2	70.1	74.0	80.5	83.7	80.2	81.8



### **Board Members**





Makoto Sumita Outside Director Director

Junji Yoneyama

Atsuo Kobayashi Director

Takehiro Kamigama Representative Director

Hiroyuki Uemura Director

Kenichi Mori

Yukio Yanase Outside Director Outside Director





Kazunori Yagi Outside Company Auditor



Noboru Hara Company Auditor



Osamu Yotsui Company Auditor



Osamu Nakamoto Outside Company



Koichi Masuda **Outside Company** Auditor





Takehiro Kamigama President and CEO, and General Manager of Humidifler Countermeasures HQ



Atsuo Kobayashi Executive Vice President In charge of Power System

In charge of Power Systems
Business Group, Ferrite &
Magnet Products Business
Group, Data Storage & Thin
Film Technology Components
Business Group, Applied Films
Business Group, Flash Memory
Applied Device Business
Division and EMC & RF
Engineering Business Division



Hiroyuki Uemura Executive Vice President

TDK-EPC President & CEO, General Manager of Ceramic Capacitors Business Group, and General Manager of Magnetics Business Group



Raymond Leung Executive Vice President General Manager of China Operation Group



Seiji Osaka Senior Vice President TDK-EPC SEVP\*&COO



Yoshiaki Hirota Senior Vice President General Manager of Power Systems Business Group



Senior Vice President
General Manager of
Manufacturing HQ, and
Deputy General Manager
of Humidifier
Countermeasures HQ



Junji Yoneyama Senior Vice President General Manager of Administration HQ



Kaoru Matsuoka Senior Vice President General Manager of Technology HQ and General Manager of Advanced Technology Development Center of Technology HQ



Noboru Saito Senior Vice President General Manager of Electronic Components Sales & Marketing Group



Robin Zeng Corporate Officer General Manager of Energy Devices Business Group



Takakazu Momozuka Corporate Officer In charge of Finance & Accounting and BPR Project



Corporate Officer
Deputy General Manager of Electronic Components Sales & Marketing Group, General Manager of Japan Sales Group and China Sales Division of Electronic Components Sales & Marketing Group



Joachim Zichlarz Corporate Officer TDK-EPC SEVP\*&CFO



Joachim Thiele Corporate Officer Deputy General Manager of Electronic Components Sales & Marketing Group



Keiichi Imamoto Corporate Officer General Manager of Ferrite & Magnet Products Business Group