

# Survey on the Current Status and Market Size of Electronic Commerce for 2004

*(Information Economy Outlook 2005)*

June 28, 2005

Ministry of Economy, Trade and Industry (METI)  
Next Generation Electronic Commerce Promotion Council of Japan  
NTT Data Institute of Management Consulting, Inc.

## Summary

### Survey Outline

Current Status of BtoB EC  
(Business to Business Electronic Commerce)

Current Status of BtoC EC  
(Business to Consumer Electronic Commerce)

# Overview of the 2004 Survey on e-Commerce

## Key Survey Organizations and Background

- Joint survey by the Ministry of Economy, Trade and Industry (METI), the Next Generation Electronic Commerce Promotion Council of Japan (ECOM), and the NTT Data Institute of Management Consulting
- Determine the status and market size of BtoB EC (business to business electronic commerce), BtoC EC (business to consumer electronic commerce), and CtoC EC (Internet auctions) in Japan in 2004
- 7th in the series of Surveys on e-Commerce Market Size, conducted since 1998

## Scope of Survey

- BtoB EC, BtoC EC, and CtoC EC (Internet auctions only) in Japan
- Determine market conditions between January and December 2004 and estimate of current market size (Note: The CtoC EC estimate is for the period April 2004 - March 2005, as this is the first time an estimate for this category has been included)

## Methods of Survey and Analysis

- Distributed questionnaire to businesses extracted from a database of listed companies, ECOM member companies and business operators; web-based survey of consumers; and interview-based survey of major business operators in each industry/industry segment
- In estimating the current market size, reference was also made to information related to e-commerce taken from METI statistics (the Survey on Information Processing Conditions), and to information which had already been publicly released
- For BtoB EC, information was collected and analyzed from 915 valid responses to the questionnaire survey and from 186 responses to the interview-based survey (comprised of 48 face-to-face interviews, and 138 telephone/e-mail interviews)
- For BtoC EC and CtoC EC, information was collected and analyzed from 2,890 valid responses to the business operator/consumer questionnaire and from 629 responses to the interview-based survey (comprised of 39 face-to-face interviews and 590 telephone/e-mail interviews)

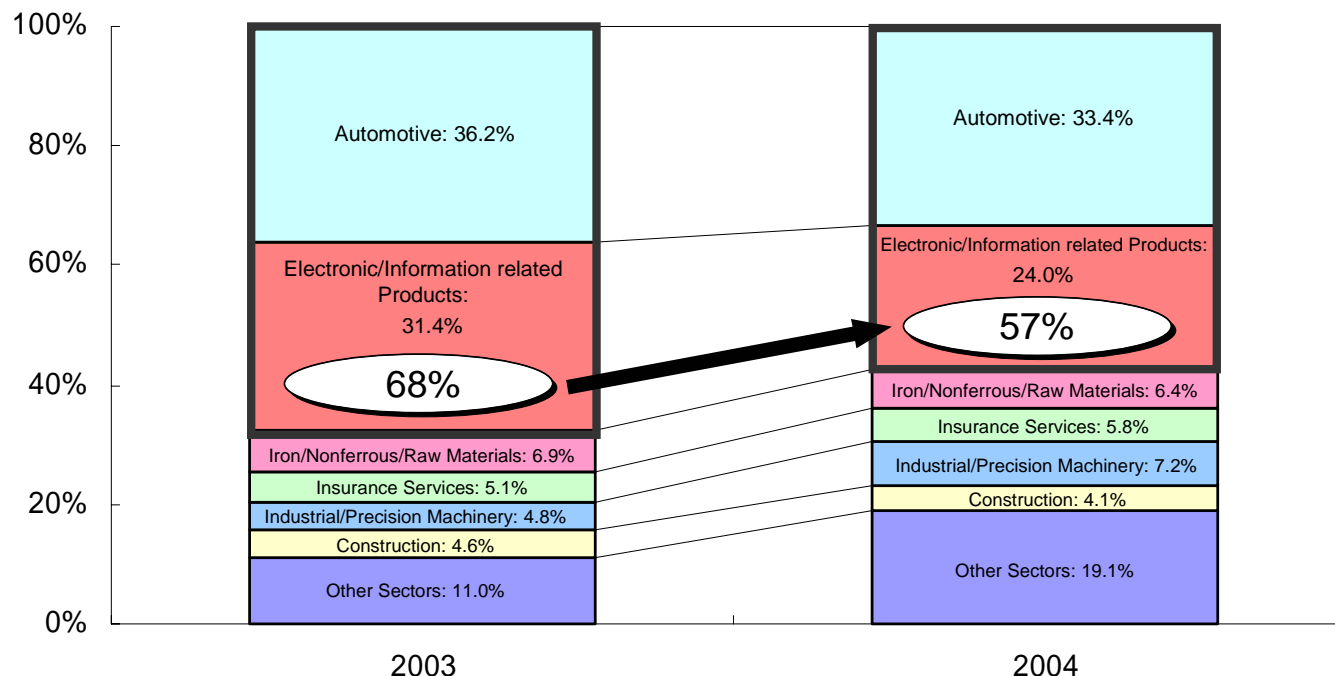
## Features of this Survey

- Increased accuracy of accumulative of EC transaction amounts for individual companies, based on the determination of the conditions surrounding each individual company
- For BtoB EC, gained an understanding of the EC transaction amounts in line with industry value chains
- First time to gain an understanding of amounts circulated in CtoC EC (Internet auctions)

- The size of the BtoB EC market expanded to 102.699 trillion yen in 2004, an increase of 33% from the previous year's 77.432 trillion yen.
  - Despite the year-on-year percentage increase falling from last year's 67%, in nominal terms the market size surged in excess of 25 trillion yen
- The market size of “Broadly defined EC” ( i.e. including traditional EDIs other than internet technology such as VAN and dedicated lines) was confirmed at 190.977 trillion yen.
  - The ratio of “Broadly defined EC” to total transactions was 27.3%, which shows that conducting commercial transactions electronically is becoming more common
  - In monetary terms, “Narrowly defined of EC” ( i.e. using only Internet technology) accounted for more than half of the “Broadly defined EC” transactions
- Looking at the size of the EC market from 1998, at the time of the first survey, the BtoB EC market has grown about 12 times in size, from 8.620 trillion yen to 102.699 trillion yen in 2004.

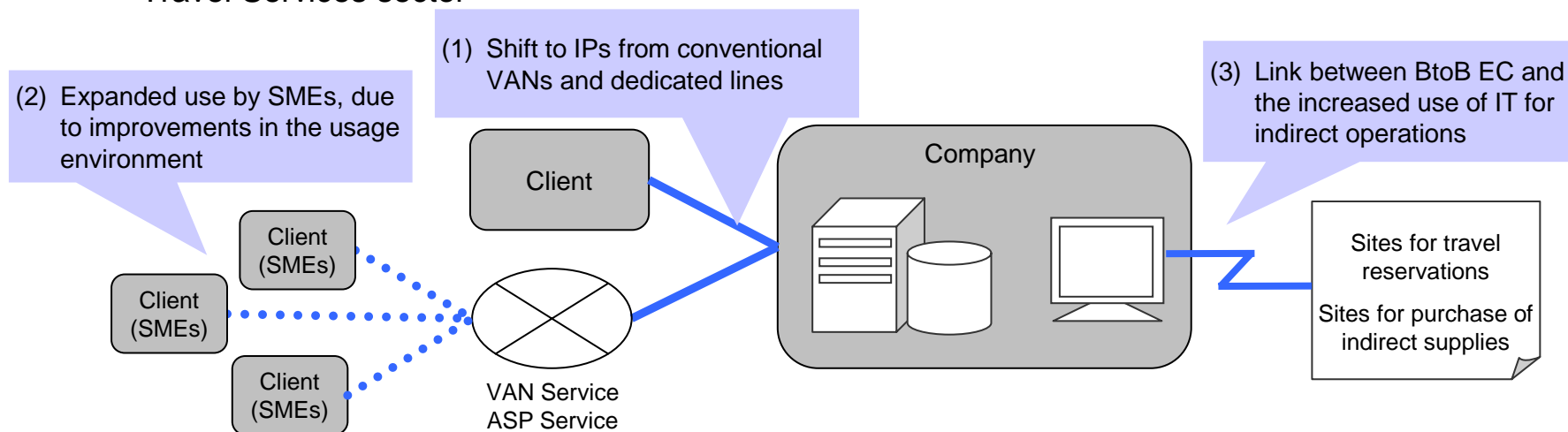
## BtoB EC: Summary of Survey Results (2)

- As to trends in the BtoB EC market in 2004, strong growth was seen in all but the two leading industry segments of Automotive and Electronic/Information Products, and increases were seen in EC activities in a wide range of other segments.
  - In the Automotive segment it was confirmed that as business results improve, there has been an increase in EC procurements from parts manufacturers, but that the rate of growth has steadied at 22.3%
  - In the Electronic/Information Products segment, EC-related activity has plateaued, and, in monetary terms, the size of the market was virtually the same as the previous year
  - As a result, there was a conspicuous decline in the share occupied by these two segments
    - The year before last, these two segments combined occupied a share of more than 80%, but last year that proportion declined to 68%, and this year it has declined 10 points further to 57%



## BtoB EC: Summary of Survey Results (2)

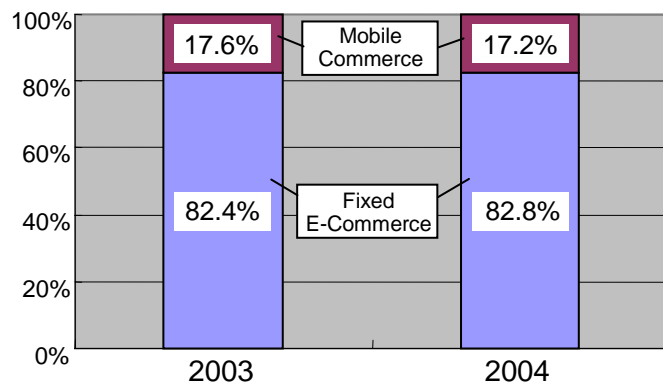
- The following three points can be indicated as key drivers in the expansion of the EC base:
  - (1) Shift from conventional VANs and dedicated lines to IPs; (2) SMEs have expanded their use of EC, due to improvements in the usage environment; and (3) development of the link between BtoB EC and the increased use of IT for indirect operations.
- (1) Shift to IPs from conventional VANs and dedicated lines
  - Replacement of conventional VAN service with Internet technology in the Food segment; and shift from existing systems to IP-based systems in the Insurance segment
- (2) Expanded use by SMEs, due to improvements in the usage environment
  - Following increased adoption of IT by SMEs and the reduction in EC implementation costs, there has been, increased uptake and usage of Web-EDI surveys in the distribution of cosmetics and toiletries and in the distribution of processed food products
- (3) Link between BtoB EC and the increased use of IT for indirect operations
  - Steady increases in activities related to the use of e-MP in the purchase of office supplies; and in accommodation reservations, direct sales from airlines and business use at travel agencies in the Travel Services sector



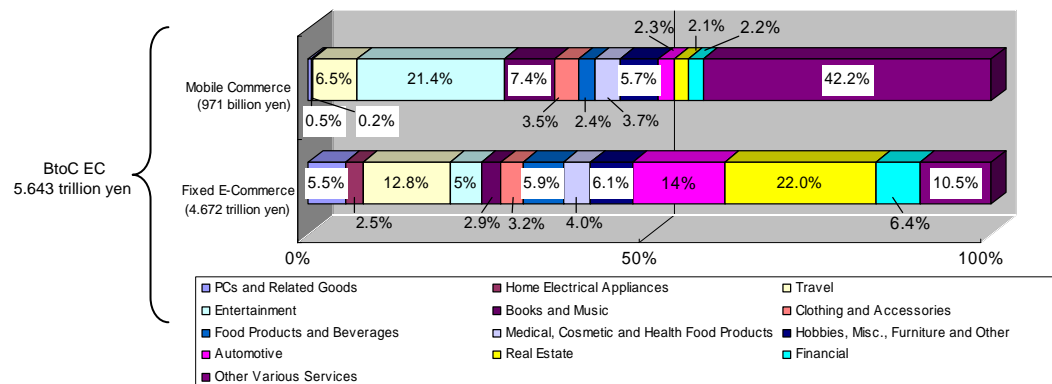
# BtoC EC: Summary of Survey Results (1)

- The size of the BtoC EC market in 2004 reached 5.643 trillion yen, an increase of 28% from the 2003 figure of 4.424 trillion yen.
  - Although the pace of growth for the EC market slowed from the previous year, it still continued to show signs of steady expansion
  - Strong growth was seen in the following industry segments: Books and Music; Financial; Medical, Cosmetic and Health Food Products; Home Electrical Appliances; Other Various Services; and Travel.
- In 2004, the mobile BtoC EC market expanded 25% to 971 billion yen from the 777 billion yen recorded in 2003.
  - The mobile proportion of the BtoC EC market shifted to just over 17%
  - Digital content for mobile phones\* has continued to perform strongly, with the launch of the new “Chakuuta-furu” service, which allows users to download music of high sound quality for ringtones
  - Mobile commerce performed strongly in such merchandising categories as Clothing and Accessories and Books and Music
- The size of the BtoC EC market expanded to 5.643 trillion yen in 2004, or to about 87 times the size, of the 64.5 billion yen market recorded in 1998 when the first survey on the EC market size was conducted.

**Comparison of Fixed E-Commerce and Mobile Commerce**



**Breakdown of Fixed E-Commerce and Mobile Commerce**



\* From this survey, Chakuuta (musical ringtones) have been shifted from the Entertainment segment to the Books and Music segment.

## BtoC EC: Summary of Survey Results (2)

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- Behind the growth of the BtoC EC market, it has become evident that websites which can offer consumers some EC-specific merit are becoming more popular
  - In the retail industry: dispatch of merchandise within 24 hours; free delivery; ability to confirm schedules at the time of purchase for merchandise requiring installation, etc.
  - The provision of overall reliability and satisfaction are becoming the key for consumers, rather than just price appeal
    - On major price comparison websites, a function has been added to display the cheapest prices inclusive of delivery
    - With regard to contributing factors in consumers purchase decisions, importance is being attached to message boards where information on usability, etc., is exchanged, rather than just on price information
- The needs of consumers for appealing merchandise is still strong
  - Activity focusing on small and medium sized EC stores, which provide merchandise that is “cheaper than any other site” or “can only be bought at this site” continued to be favorable in 2004
  - Consumer recognition and acceptance has been further advanced through aggressive exposure in the media by major operators of virtual shopping malls, which support small and medium sized EC stores. This, in turn, is having a favorable impact on EC stores opened in the malls.
- There is a link between an increase in sales and the provision of detailed information using net communities or blogs
  - A sense of reliability is created by setting up a platform for “direct dialogue” through the operation of message boards, etc., which directly reflect the voices of consumers
  - Blogs can be used as a means of providing information on products which cannot be fully displayed in catalog specifications
  - Positive use of “affiliate programs,” etc., which mesh with transmissions of personal information from blogs



## BtoC EC: Summary of Survey Results (3)

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- In BtoC EC, there is a growing popularity among consumers for the provision of added value through the digitalization of services which are highly ingrained in the lifestyle of many consumers, are geared to mobile phones, and go beyond the digitalization of transactions.
  - In the Travel segment, in terms of improving convenience for consumers, the popularity of mobile phone based Ticketless Boarding Services initiated by airlines and some bus companies is growing
  - At the same time in the Entertainment segment, there is growing use of electronic ticket services which eliminate the need for forwarding conventional paper tickets
    - Services whereby ticket information for an event is downloaded onto a mobile phone, and the consumer can have the ticket issued at a KIOSK terminal at their nearest convenience store, anytime prior to the event date
- In Mobile Commerce, here is a continuing trend forward using mobile phones as “order terminals” linked to some other media.
  - “Click and catalog services” (which make it possible to place orders from mobile phones using order numbers, etc. listed, in the catalogs of retail companies) continue to be popular, especially among females, and continue to lead the mobile retail sector
    - There is also a wide range of businesses actively using web-based services accessed from mobile phones, by utilizing two dimensional bar codes (QR codes). Rather than directly contributing monetarily to Mobile Commerce, these services have been positioned as a means to more easily access the Internet from mobile phones.
- However, “pure mobile phone EC” is also making advance, especially among a segment of young female consumers, Search, selection and placement of orders for merchandise or services are completed purely on a mobile phone, particularly in the Clothing and Accessories segment.

## CtoC EC: Summary of Survey Results

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- Total amount circulated in the CtoC EC market in 2004 reached 784 billion yen
  - Starting from this survey, we have determined amounts circulated in the CtoC EC market (Internet auctions)
  - The CtoC EC market has grown to 14% of the BtoC EC market of 5.643 trillion yen
  - The total amount circulated in the CtoC EC market was bigger in size than any single industry segment in the BtoC EC retail sector
  - Participation in auctions from mobile terminals has increased, particularly among younger consumers, and this is expected to grow further in the future.

Note: The total circulated amount has been estimated from interviews with Internet auction administrators and from web-based questionnaires aimed at consumers on their use of the Internet

- Use of Internet auctions has picked up, particularly in such industry segments as Fashion; Books and Magazines; and Toys and Games
  - Similarly to retail EC, Internet auction transactions have permeated all industry segments
  - In particular, there is a high participation rate in auctions in the categories of Fashion; Books and Magazines; and Toys and Games, and it is estimated that this participation focuses on the use of Internet auctions

Note: Auction participation rates by industry segment are derived from web-based questionnaires aimed at consumers on their use of the Internet.

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Current Status of BtoB EC  
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# Definition of E-Commerce (Narrow Definition)

This survey adopts the same definition for e-commerce (EC) as in the past: that is, EC covers commercial transactions which use Internet technology, and includes the transaction amount contracted in the purchase/sales orders. With regard to the Automotive and Real Estate segments in the B-to-C market, only those amounts that have clear contributions to sales are included.

## Definition of e-commerce in this survey

- *E-commerce means the conduct of commerce<sup>1</sup> through computer network systems using Internet technology<sup>2</sup>, the transactional values of which can be identified<sup>3</sup>.*

- 1: *“Conduct of commerce” means the exchange of goods, services, information, and money between suppliers and buyers associated with the commercial transfer of assets between economic units.*
- 2: *“Internet technology” means technology using TCP/IP protocols. Network lines include the public Internet, Internet VPN, and dedicated IP lines. (Purchase/sales orders made by exchanging occasional e-mail are excluded.)*
- 3: *Giving quotations, providing information, and other pre-order activities are included as “conduct of commerce”, as long as the conduct has clearly led to purchase/sales orders.*

Conduct of commerce over networks using Internet technology

Before order

- Obtaining/providing product info.
- Quote/negotiation/commissions
- Demand planning, inventory info. sharing

At time of order

- Open orders
- Firm orders
- Actual orders based on the shared plan and inventory information

After order

- Invoicing/clearance/delivery
- Sharing design information

General e-commerce with order requirements



*Include confirmed sales amounts*



E-commerce in pre-order processes (automotive and real estate segments of B-to-C market)



*Include amounts which can clearly be identified as having contributed to the sale*

Legend



: Always include



: Include as appropriate

# Definition of E-Commerce (Broad Definition)

Since the last survey, “broadly defined e-commerce” has included conventional EC transactions as well as those commercial transactions which do not use Internet technology. The market size was estimated based on this definition.

## Broadly defined e-commerce (EC)

*Broadly defined E-commerce means the “conduct of commerce” through computer network systems, the transactional values of which can be identified*

- *Use of Internet technology is not a requisite*
- *Same definition of “conduct of commerce” as conventional EC definition*

## Relationship between narrowly defined EC and broadly defined EC

### *Broadly defined EC (using computer networks)*

Non-TCP/IP-based conventional EDI are used, including VANs and dedicated lines

Non-TCP/IP-based satellite communication, broadcasting and ISDN, etc. are used

### *Narrowly defined EC*

Networks are used which adopt Internet technology (TCP/IP)

IP-VPN and industry-dedicated IP networks (JNX, etc.) are used

Public Internet (including Internet VPN) is used

Simple exchanges of e-mail are not included.

# Scope of the Survey

In the BtoB EC market, the scope of the survey was “broadly defined BtoB EC,” and included narrowly defined BtoB EC as one portion of this. In the Automotive and Real Estate segments of the BtoC EC market, Mobile Commerce has been singled out.

## BtoB EC Scope

### BtoB EC:

Businesses/government entities pay businesses in exchange for commodities (goods, services, information, etc.)

- Includes e-marketplaces (BtoB EC on platforms used by multiple selling/buying enterprises)
- Includes BtoG EC (EC to national and local government entities)

*Broadly defined BtoB EC*  
(includes conduct of commerce through conventional EDI such as VANs and dedicated lines)

*BtoB EC*  
(Conduct of commerce over networks which use Internet technology)

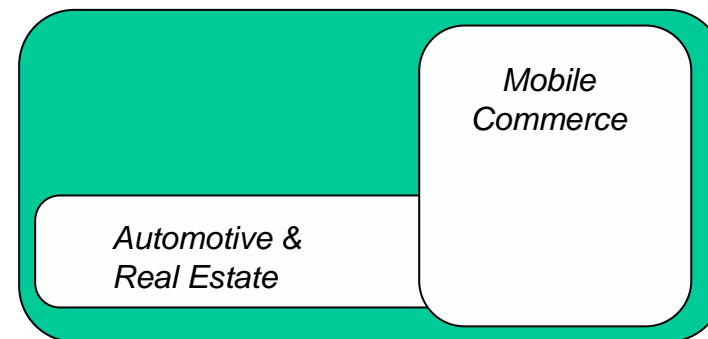
## BtoC EC Scope

### BtoC EC:

Households pay businesses in exchange for commodities (goods, services, information, etc.)

- E-commerce involving pre-order stages (quotes, commissioning, etc.) for such segments as Automotive and Real Estate
- Mobile commerce: BtoC EC using mobile terminals (Detailed definition is provided later)

*Overall BtoC EC market (all goods and services)*



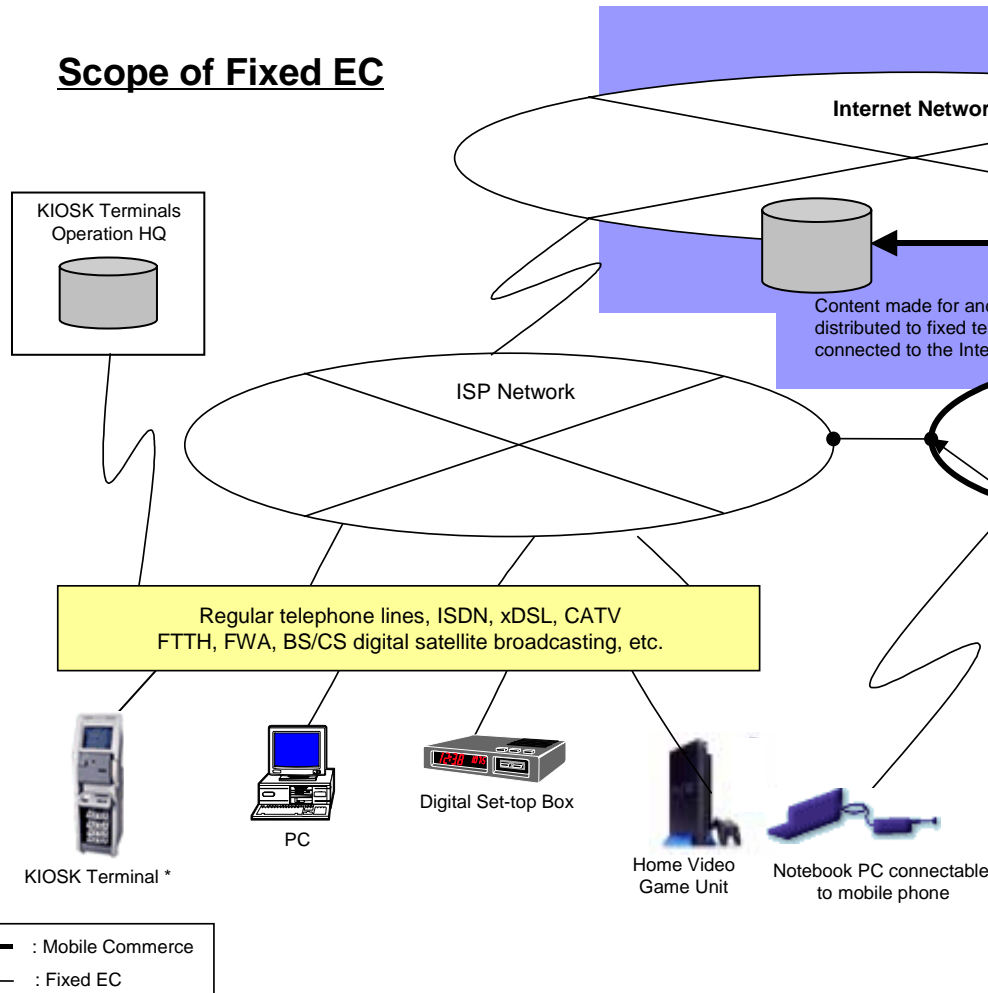
Note 1: In principle, those direct Internet sales of PCs, travel, etc., which are deemed as household spending, are included in BtoC. Corporate sales of PCs and business travel expenditure are included in BtoB.

Note 2: In the Automotive (excluding automobile parts and car accessories) and Real Estate segments, when the provision of information, or requests for documents or quotes, are made through the Internet as part of the pre-order process and this leads to a contract being concluded at a real store, then any identifiable amounts are included.

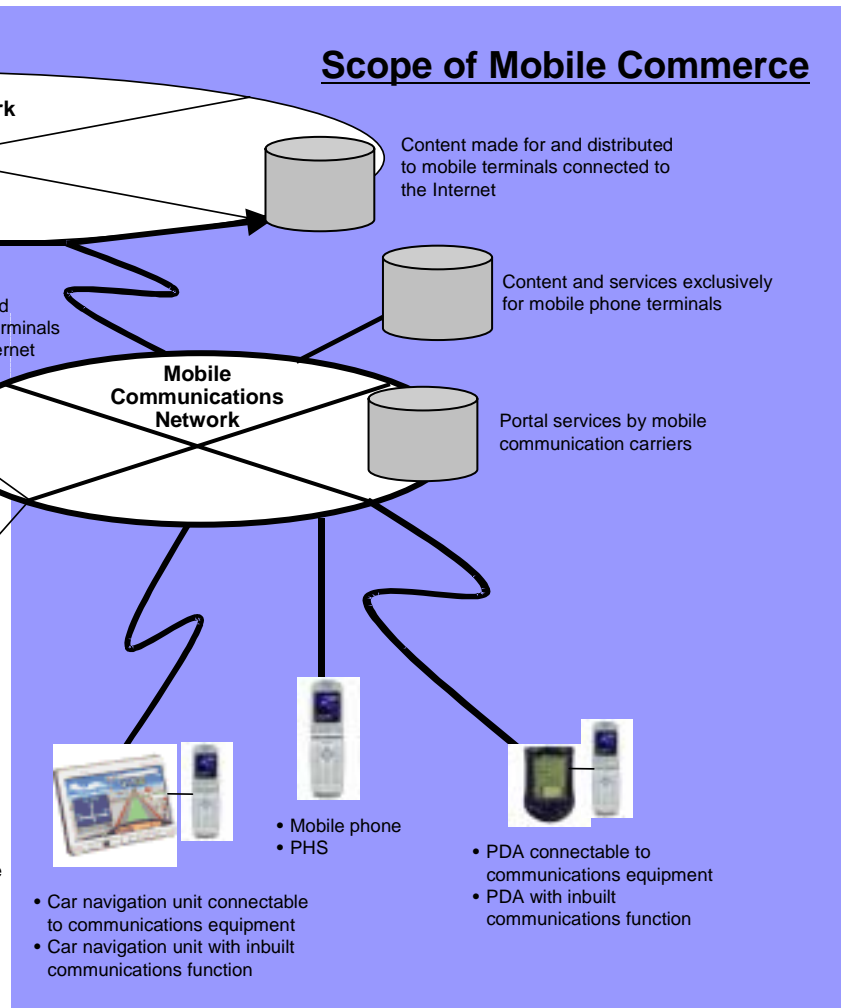
# Definition of Mobile Commerce

In this survey, Mobile Commerce is defined as e-commerce which is conducted via terminals made for use outside of the home, including mobile and PHS phones, PHSs, PDAs which are connectable to (or have inbuilt) communication equipment, and car navigation units connectable to communication equipment.

## Scope of Fixed EC



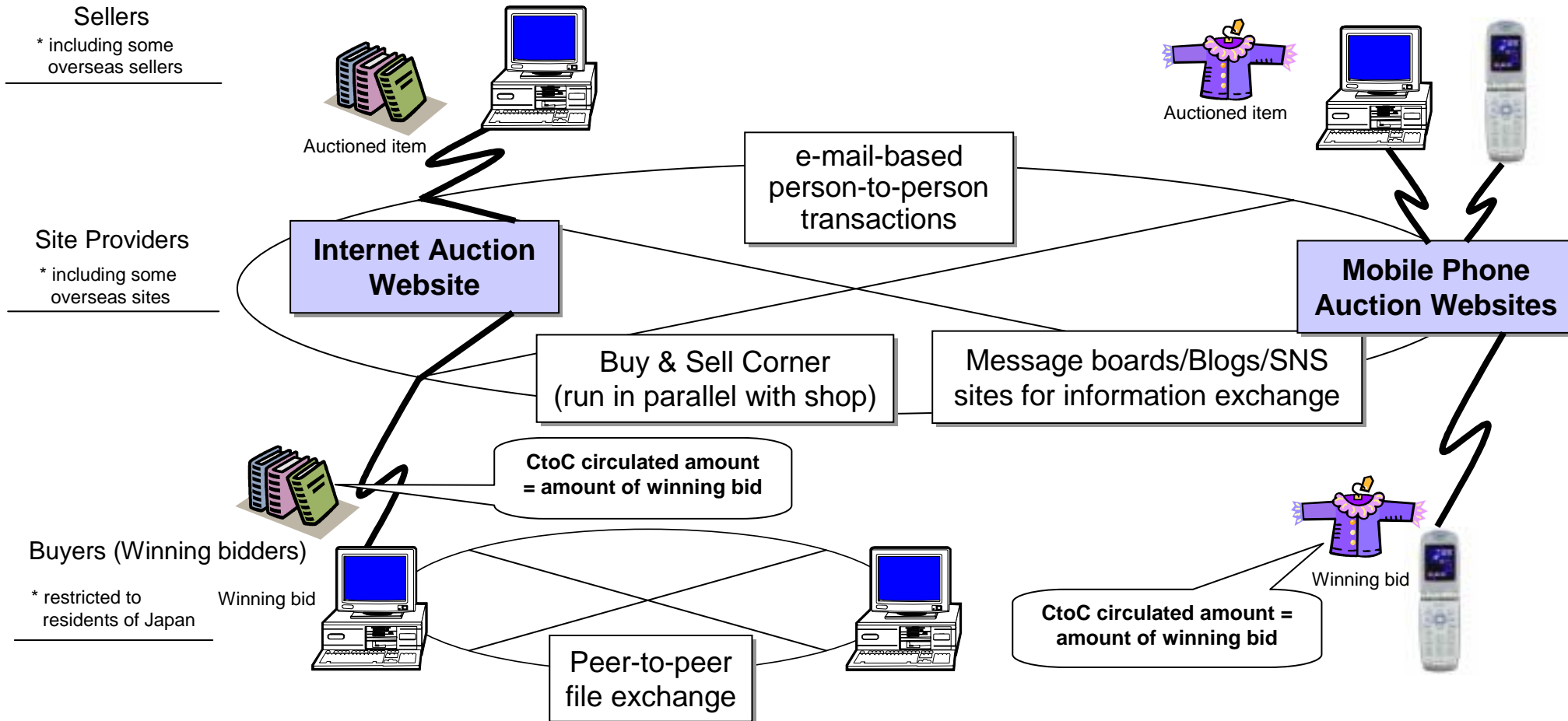
## Scope of Mobile Commerce



\* Fixed EC also includes such transactions as reservations and sales of tickets and accommodation using KIOSK terminals which are installed at convenience stores.

# Definition of CtoC (Internet Auctions)

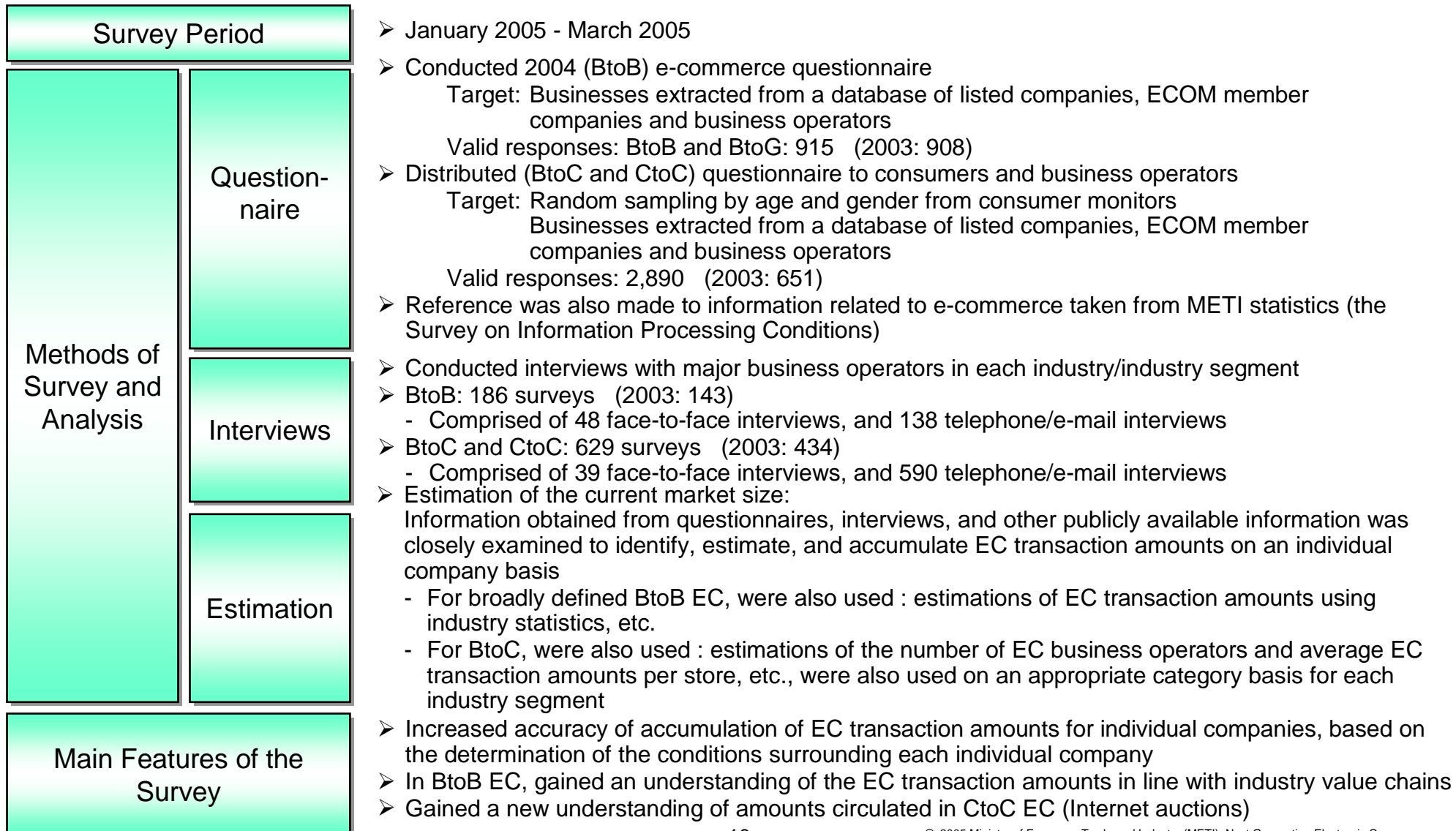
In this survey, for the first time, we attempted to determine the distribution of CtoC EC, typified by Internet auctions. The scope of CtoC EC stretches far and wide, and it would be difficult to identify all CtoC EC transactions. Therefore, the scope of this survey is limited to “the aggregate of auction amounts (contractual amount of the transactions) in Internet auctions”.





# Methods of Survey and Analysis

Wherever possible, information obtained from questionnaires and interviews was closely examined to identify and estimate EC transaction amounts on an individual company basis. The current size of the EC market was estimated based on the aggregate of amounts by industry segment.



Summary

Survey Outline

Current Status of BtoB EC  
(Business to Business Electronic Commerce)

Current Status of BtoC EC  
(Business to Consumer Electronic Commerce)

# BtoB EC: Industry Segments Covered by the Survey

The BtoB EC industry sectors covered by the survey were categorized into 16 segments (and 46 sub-segments), similar to the 2003 survey, and the EC market size and actual conditions were determined for each segment.

Industry Segment	Sub-segment
Food	Primary agricultural produce (rice, fruit and vegetables, etc.); Primary marine produce (fish, seaweed, etc.); Food products; Beverages/tobacco
Textiles/Sundry Goods	Textile/apparel products (silk reeling, cotton spinning, synthetic fibers, leather goods, etc.); Timber/wood products/furniture; Cosmetics/toiletry goods
Chemical Products	Oil/rubber products; Chemical/plastic products; Medical/pharmaceutical products; Ceramic/earth/stoneware
Iron/Nonferrous/Raw Materials	Primary forestry produce; Primary mining produce; Steel products; Nonferrous products
Industrial/Precision Machinery	General machinery/tools; Industrial electrical appliances; Non-automotive transportation machinery; Precision machinery; Other products (precious metals, musical instruments, toys, etc.)
Electronic/Information Products	Home electrical appliances; Computer-related devices; Electronic/communications equipment other than computer-related devices
Automotive	Automobiles (motorcycles, family cars, trucks, etc.); Automobile parts
Construction	Construction (residential and non-residential construction); Civil engineering
Paper/Office Products	Paper/processed paper products/pulp; Office products
Utility Related Services	Electricity/gas/water-related services
Financial Services	Financial services (banking, securities, clearance services, etc.)
Insurance Services	Insurance services (life insurance, indemnity insurance)
Transportation/Travel Services	Transportation/travel services (land/marine/air transportation, air cargo, warehousing, travel arrangements, tourism, etc.)
Communications/Broadcasting Services	Communications services; Broadcasting services (TV, radio, CATV, etc.)
Information Processing/Software-related Services	Data processing/service provision; Software-related services
Other Services	Publishing/printing; Education; Medical/public health/welfare; Advertising; Real estate related; Leasing; Professional services; Temporary staffing; Entertainment services; Other services

Note: Except for Financial Services, the amount included in EC shall be the purchase amount for the relevant industry segment, which is paid by the purchasing company. In the Financial Services segment, Banking/Securities shall include fees, and Insurance shall include the contract amounts.

# BtoB EC: Market Size in 2004 - Overall Picture


The BtoB EC market expanded to 102.699 trillion yen in 2004 - a 33% increase from 2003, breaking the 100 trillion yen barrier. The size of the “broadly defined EC” market, including conventional EDI such as VANs and dedicated lines, reached approximately 191 trillion yen (27.3% of total transactions); and the majority of this was accounted for by “narrowly defined EC” based on Internet technology.

## BtoB EC Market Size in 2004

Segment	Previous Survey (2003)		Current Survey (2004)				
	Size of narrowly defined EC market		Size of narrowly defined EC market			Size of broadly defined EC market	
	Market size (billion yen)	EC Rate*	Market size (billion yen)	Year-to-year comparison	EC Rate*	Market size (billion yen)	EC Rate*
Food	1,403	2.4%	2,486	177.2%	4.3%	26,353	45.8%
Textiles/Sundry Goods	2,066	6.2%	2,465	119.3%	7.5%	9,832	29.9%
Chemical Products	1,430	2.5%	6,149	430.0%	11.0%	23,382	41.7%
Iron/Nonferrous/Raw Materials	5,367	13.5%	6,606	123.1%	16.4%	12,177	30.3%
Industrial/Precision Machinery	3,736	7.5%	7,407	198.3%	14.0%	10,970	20.8%
Electronic/Information Products	24,294	45.3%	24,659	101.5%	44.7%	32,701	59.2%
Automotive	28,049	57.6%	34,302	122.3%	65.6%	44,727	85.6%
Construction	3,549	4.1%	4,190	118.1%	4.8%	4,190	4.8%
Paper/Office Products	490	2.6%	1,158	236.3%	6.1%	4,237	22.3%
Utility Related Services	0	0.0%	2	-	0.0%	2	0.0%
Financial Services	0	0.0%	487	-	1.5%	986	3.0%
Insurance Services	3,934	12.0%	5,937	150.9%	17.2%	9,591	27.8%
Transportation/Travel Services	767	3.0%	1,065	138.9%	4.1%	4,633	18.0%
Communications/Broadcasting Services	13	0.1%	286	2200.0%	2.4%	286	2.4%
Information Processing/ Software-related Services	2,009	20.1%	3,363	167.4%	33.1%	4,356	42.8%
Other Services**	325	0.3%	2,137	657.5%	1.9%	2,554	2.2%
<b>Total</b>	<b>77,432</b>	<b>11.2%</b>	<b>102,699</b>	<b>132.6%</b>	<b>14.7%</b>	<b>190,977</b>	<b>27.3%</b>

\* The EC Rate is the proportion of EC to the aggregate of the applicable parts of the interim and final demand.

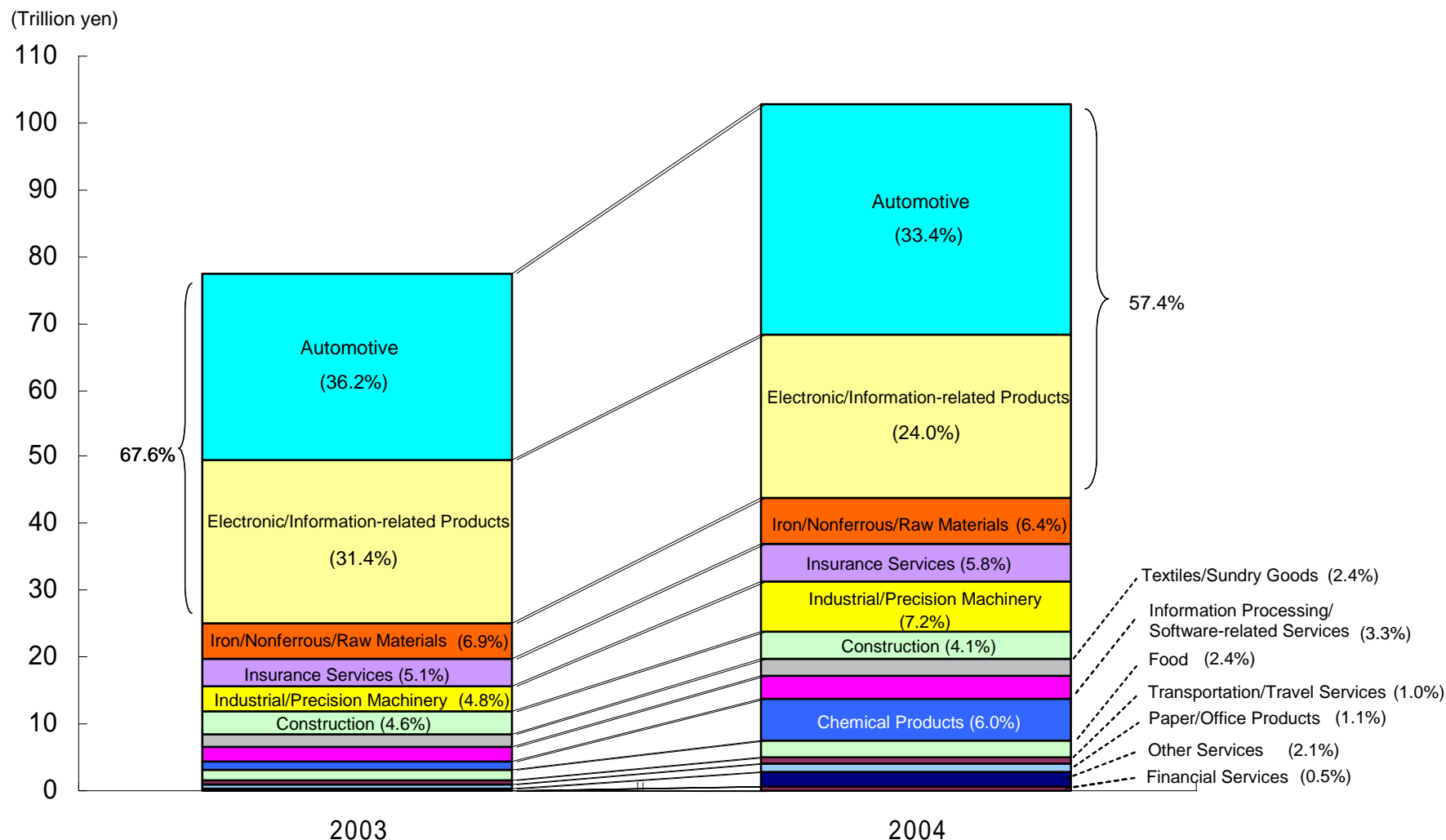
\*\* Other Services includes publishing/printing, medical/public health/welfare, advertising, real estate, leasing, professional services, temporary staffing, and entertainment services.

 Indicates segments that increased to more than 133% of the previous years.

# BtoB EC (Narrow definition): Segment Distribution Trends

Looking at the distribution of BtoB EC among industry segments, “Automotive” had been the largest contributor to the expansion of BtoB EC. Despite this, there has been a decline in the proportion accounted for by the two leading segments “Automotive” and “Electronic/Information Products,” and growth has been seen in EC activity in a wide range of industry segments.

(Narrowly defined) Market Size by Industry Segment in 2003 and 2004



## BtoB EC (Narrow definition): Trends and Characteristics in 2004 (1)

In the Automotive industry, the market size exceeded 30 trillion yen, due to confirmed growth in the business results of automobile manufacturers and the broadening of EC. In the Electronic/Information Products segment, EC activity in the industry continues to plateau, and so the size of the EC market was about the same as in 2003.

Segment	BtoB EC market size (billion yen)		Main characteristics and background
	(Figures in parentheses indicate the market size of “broadly defined EC”)		
Automotive	34,302	(44,727) [y/y: 122.3%]	<ul style="list-style-type: none"><li>• Value of EC transactions is increasing in line with the growth of automobile manufacturer business results.</li><li>• Commerce between automobile manufacturers and Tier 1 parts manufacturers is almost totally computerized.</li><li>• Computerization is also proceeding in major Tier 1 and Tier 2 automobile parts manufacturers; and the use of EC is spreading as far as middle-sized/lower tier manufacturers.</li></ul>
Electronic/ Information Products	24,659	(32,701) [y/y: 101.5%]	<ul style="list-style-type: none"><li>• Despite expansion in the digital home electrical appliances and electronic parts markets, overall growth has been sluggish in the home electrical appliance market; and there has only been slight growth in the overall value of EC transactions for electronic/information products.</li><li>• It was confirmed that, in addition to EC activity by major electrical appliance and home electrical appliance manufacturers, manufacturers of electronic devices have also made good use of EC.</li></ul>

## BtoB EC (Narrow definition): Trends and Characteristics in 2004 (2)

In the Chemical Products; Iron/Nonferrous/Raw Materials; and Industrial/Precision Machinery segments, strong growth in the EC markets has been demonstrated by the fact that the state of previous EC activities has been reconfirmed through questionnaire and interview surveys, and the fact that the overall market is showing signs of strong growth.

Segment	BtoB EC market size (billion yen) (Figures in parentheses indicate the market size of "broadly defined EC")	Main characteristics and background
<ul style="list-style-type: none"> <li>Chemical Products</li> </ul>	6,149 (23,382) [y/y: 430.0%]	<ul style="list-style-type: none"> <li>The value of EC transactions is increasing in industries such as paint and other coating materials, medical and pharmaceutical products, and ceramics, where EC activity was already being conducted.</li> <li>The survey confirmed broadly-defined EC activity, including conventional EDI services between oil wholesalers and distributors/customers. Some have moved to IP-based EC, and the value of EC transactions has increased significantly.</li> <li>Conventional EDI services are the norm between medical/pharmaceutical product manufacturers and wholesalers.</li> </ul>
<ul style="list-style-type: none"> <li>Iron/Nonferrous/Raw Materials</li> </ul>	6,606 (12,177) [y/y: 123.1%]	<ul style="list-style-type: none"> <li>In 2003, conventional EDI services between steel manufacturers and trading companies shifted to EDI based on Internet technology. Subsequent to this, the value of EC transactions has shown strong growth.</li> <li>Existing EC activity was identified in the nonferrous industry.</li> </ul>
<ul style="list-style-type: none"> <li>Industrial/Precision Machinery</li> </ul>	7,407 (10,970) [y/y: 198.3%]	<ul style="list-style-type: none"> <li>In addition to confirming that there was growth in the market for the procurement of general machinery and instruments and of electrical equipment for industry due to an increase in the demand for construction machinery, it was also confirmed that the use of EC in medium-sized enterprises was on the rise.</li> <li>In the electricity and other industries, the value of EC transactions is increasing in line with the expansion of EC in the procurement of materials for industrial/precision machinery.</li> </ul>

## BtoB EC (Narrow definition): Trends and Characteristics in 2004 (3)

In the Food segment, the conventional VAN service which handles primary agricultural produce is being replaced with a service based on Internet technology, and the market is growing strongly. In the processed foods and cosmetics/toiletry goods sub-segments, the use of Web-EDI for distribution by small and medium-sized enterprises is steadily growing.

Segment	BtoB EC market size (billion yen) (Figures in parentheses indicate the market size of "broadly defined EC")	Main characteristics and background
<ul style="list-style-type: none"> <li>Food</li> </ul>	2,486 (26,353) [y/y: 177.2%]	<ul style="list-style-type: none"> <li>Conventional EDI services are the main service for distribution used by manufacturers, wholesalers and retailers in the food products and beverages/tobacco sub-segments; but the use of Web-EDI services is increasing, mainly among new entrants and small to medium-sized enterprises.</li> <li>The conventional EDI for transactions between agricultural producers and the wholesale market has been overhauled to an IP base.</li> <li>The value of EC transactions is also increasing in some e-MPs.</li> </ul>
<ul style="list-style-type: none"> <li>Textiles/Sundry Goods</li> </ul>	2,465 (9,832) [y/y: 119.3%]	<ul style="list-style-type: none"> <li>In textiles/apparel products, there has been an increase in the value of EC transactions for sales from materials manufacturers, attributable to the boom in materials manufacturing.</li> <li>Transactions between manufacturers and wholesalers in cosmetics/toiletry goods, which have been conducted on conventional VANs, are gradually being shifted to TCP/IP services.</li> <li>At the same time, EC activities using Web-EDI services are becoming more common among small to medium-sized enterprises.</li> </ul>



## BtoB EC (Narrow definition): Trends and Characteristics in 2004 (4)

There has been further computerization of indirect business operations by enterprises. EC purchases of office products and EC arrangements for business trips are becoming more common. However, conventional EDI services remain the mainstay of transactions between manufacturers and wholesale merchants in the Paper segment, and between major transporters and travel agencies in the Travel segment.

Segment	BtoB EC market size (billion yen) (Figures in parentheses indicate the market size of "broadly defined EC")	Main characteristics and background
<ul style="list-style-type: none"> <li>Paper/Office Products</li> </ul>	1,158 (4,237) [y/y: 236.3%]	<ul style="list-style-type: none"> <li>In office products, there were signs of EC transactions further increasing for purchases of products not directly related to business, irrespective of the size of the company.</li> <li>In paper, conventional EDI services are the mainstream for transactions between paper manufacturers and wholesale merchants, which make up the majority of transactions in monetary terms.</li> <li>There were signs of individual EC activities in the sales of some paper wholesale merchants.</li> </ul>
<ul style="list-style-type: none"> <li>Transportation/Travel Services</li> </ul>	1,065 (4,633) [y/y: 138.9%]	<ul style="list-style-type: none"> <li>In terms of EC activities between travel agencies and businesses, there has been steady growth in direct sales from accommodation websites and airlines, and in business travel management services offered by travel agencies</li> <li>Conventional EDI services dominate transactions between major transport operators and travel agencies.</li> <li>Analysis of the survey has been unable to identify any particular signs of expansion in EC activity for transactions between transport operators and shipping companies in the transportation (distribution) industry segment</li> </ul>

## BtoB EC (Narrow definition): Trends and Characteristics in 2004 (5)

In Construction, Information-processing/Software-related Services, Other Services and other industry segments where EC activity had been dynamic until about two or three years ago, the use of EC is making steady inroads.

Segment	BtoB EC market size (billion yen) (Figures in parentheses indicate the market size of "broadly defined EC")		Main characteristics and background
• Construction	4,190 (4,190) [y/y: 118.1%]		<ul style="list-style-type: none"> <li>• In transactions between national/local government entities and major construction companies, there has been an expansion in electronic bidding for public works. Last year, a particularly expansive implementation of the system by local governments was noticed.</li> <li>• In transactions between major construction companies and their affiliates, there has been a steady increase in EC activity for work orders and contracts.</li> <li>• EC activity has begun to emerge for work orders and contracts between residential housing manufacturers and building contractors, similar to that for major construction companies.</li> </ul>
• Information-processing/ Software-related Services	3,363 (4,356) [y/y: 167.4%]		<ul style="list-style-type: none"> <li>• EC activity has been on the rise in purchase orders of outsourced software, which are placed with software developers by computer manufacturers and system integrators</li> </ul>
• Other Services	2,137 (2,554) [y/y: 657.5]		<ul style="list-style-type: none"> <li>• There has been an increase in EC activity between temporary staffing firms and businesses.</li> <li>• In line with the increase in the number of participating broadcasters, there was an increase in the value of EC transactions dealing with advertisements between broadcasting companies and advertising agencies.</li> <li>• EC activity between publishers and publishing agencies in the publishing/printing segment was reconfirmed; and orders placed by EC for specialized services offered by electrical power companies and public agencies were also reconfirmed.</li> </ul>

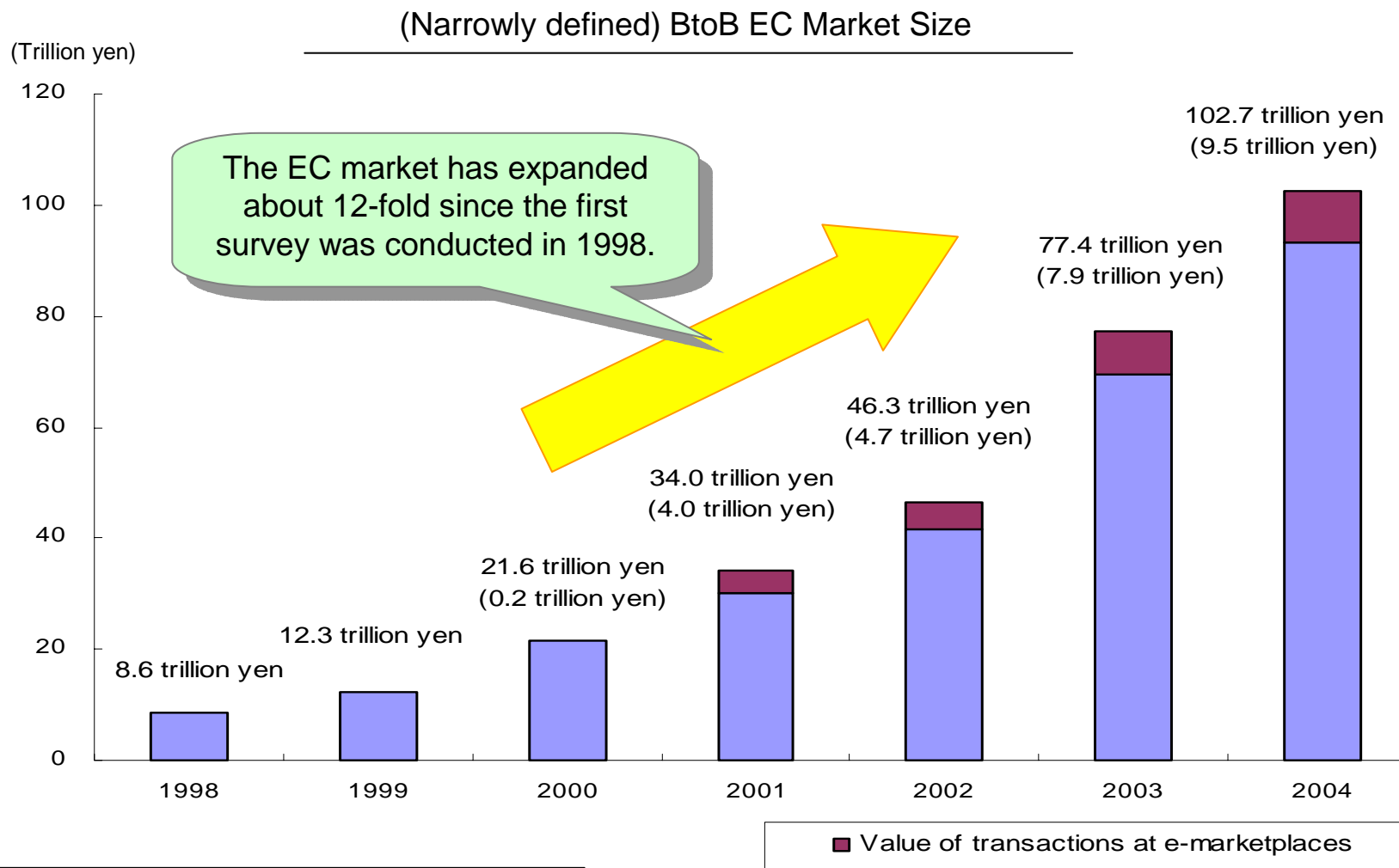
## BtoB EC (Narrow definition): Trends and Characteristics in 2004 (6)

There has been a net increase in the size of the EC market in Insurance Services, as there has been greater utilization of public Internet networks in agency systems. Examples can be seen among utilities operators and communications/broadcasting services operators, where, by linking intracompany operations and EC, operational efficiencies have been enhanced and positive effects from reducing procurement costs have been achieved.

Segment	BtoB EC market size (billion yen)		Main characteristics and background
	(Figures in parentheses indicate the market size of "broadly defined EC")		
• Financial Services	487	(986)	<ul style="list-style-type: none"><li>• In transactions between banks and businesses, trends have been noticed which are associated with a shift from the conventional "firm banking" to corporate Internet banking.</li><li>• Clearance systems for banking, securities, etc, are becoming more TCP/IP-based.</li><li>• In 2002, moves were made to transfer the agency system, which connects insurance companies and agencies, from the conventional EDI-based service to a system which utilizes public Internet networks. As a result, there has been an increase in the value of EC transactions.</li><li>• EC activity was confirmed in spot transactions for interchange power between electricity providers.</li><li>• There has been expanded use of EC in the procurement of materials by electricity and gas providers. (The value of each transaction has been included in the specific industry segment according to the procured item.)</li><li>• With regard to applications for ADSL lines, operational alliances and EC activity were identified between the ISP, ISP line wholesalers and telephone carriers.</li></ul>
	[y/y: - ]		
	* No results for 2003		
• Insurance Services	5,937	(9,591)	
	[y/y: 150.9% ]		
• Utility Related Services	2	(2)	
	[y/y: - ]		
	* No results for 2003		
• Communications/Broadcasting Services	286	(286)	
	[y/y: 2200.0%]		

## BtoB EC (Narrow definition): Transition of Market Size

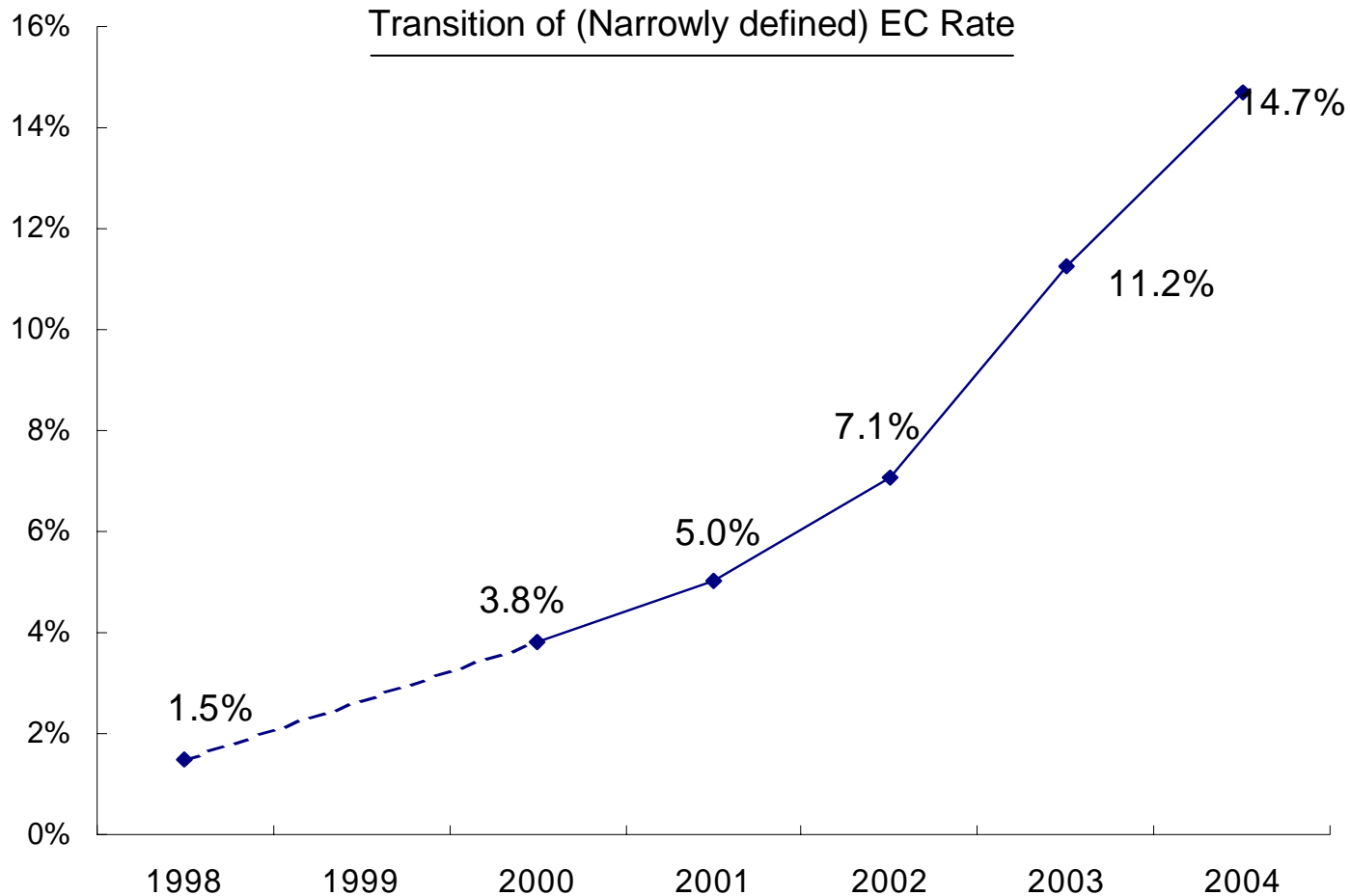
If we look at 1998, when the first survey was conducted, we can see that the value of BtoB EC transactions has increased 12-fold in six years from a base of 8.620 trillion yen. Compared to the 50-60% average rate of increase up until 2003, the growth rate in 2004 slowed somewhat to 33%. However, in nominal terms, the value of EC transactions has still increased year-on-year by more than 25 trillion yen.



Note: 1999 figures are estimates from the 1998 survey, because no survey was conducted in 1999.  
Figures in parentheses show the value of transactions in e-marketplaces.

## BtoB EC (Narrow definition): EC Rate

Again, if we look at the movement in the EC rate (proportion of narrowly defined transactions to total transactions) from 1998, when the first survey was conducted, we can see that in the 1998 survey the rate was 1.5%, but in 2004, this had reached 14.7%.



Note: A dashed line extends between 1998 and 2000 because no survey was conducted in 1999.

Summary

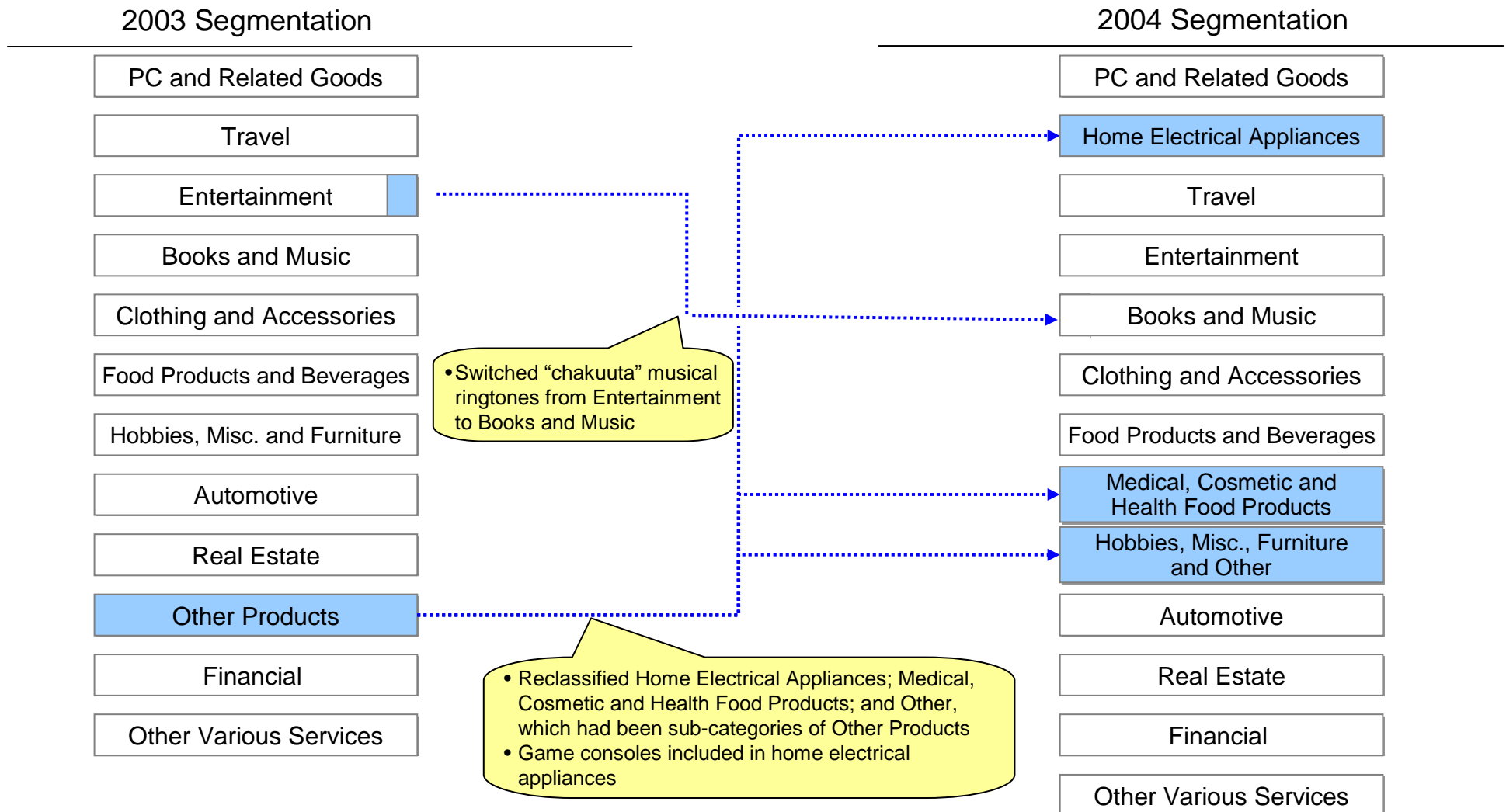
Survey Outline

Current Status of BtoB EC  
(Business to Business Electronic Commerce)

Current Status of BtoC EC  
(Business to Consumer Electronic Commerce)

# BtoC EC: Industry Segments Covered by the Survey: Partial Change to Segmentation

Some changes have been made to the segmentation of BtoC EC. Specifically, Home Electrical Appliances (including Game Consoles); and Medical, Cosmetic and Health Food Products, which had been sub-segments of Other Products, were reclassified into their own segments; and Other has been included in Hobbies, Miscellaneous and Furniture. Also, “chakuuta” musical ringtones were switched from Entertainment to Books and Music.



# BtoC EC: Industry Segments Covered by the Survey

As described previously, as a result of the partial changes to segmentation, the BtoC EC market was classified into 14 segments (61 sub-segments), and the current market size of each segment was determined.

Segment	Sub-segment
<ul style="list-style-type: none"> <li>• PC and Related Goods</li> <li>• Home Electrical Appliances</li> <li>• Travel</li> <li>• Entertainment</li> <li>• Books and Music</li> <li>• Clothing and Accessories</li> <li>• Food Products/Beverages</li> <li>• Medical, Cosmetic and Health Food Products</li> <li>• Hobbies, Misc., Furniture and Other</li> <li>• Automotive</li> <li>• Real Estate</li> <li>• Financial (Banking/ Securities, etc.)</li> <li>• Financial (Life/Non-life Insurance)</li> <li>• Other Various Services</li> </ul>	<ul style="list-style-type: none"> <li>• Factory-outlet stores; Major mass retailers; Small and medium-sized stores; Software (packaged sales/downloaded sales)</li> <li>• Home electrical appliances and AV equipment; Game consoles</li> <li>• Passenger transport company tickets and seat reservations (air, rail, land, water, etc.); Accommodation reservations at specific lodging; Accommodation reservation specialists; Travel agencies</li> <li>• Booking or purchasing of tickets to events; Purchasing of video game software, DVDs or videos; Other entertainment services (digital content for mobile phones / PCs)</li> <li>• Books (online book sales, electronic books, news service for mobile phones, etc.); Music (online CD sales, music distribution, “chakuuta” musical ringtones , “Chakuuta-furu” high-quality musical ringtones ) * From 2004 onward, “Chakuuta” has been switched to this segment from the Entertainment segment.</li> <li>• Major stores (including catalog retailers); Small and medium-sized stores</li> <li>• Major stores (including department stores and catalog retailers); Small and medium-sized stores</li> <li>• Health food products (including some pharmaceutical products); Cosmetics</li> <li>• Major stores (including department stores and catalog retailers); Small and medium-sized stores; Flowering plants; Gifts (excluding food products); Other</li> <li>• Four-wheel vehicles; Two-wheel vehicles (new and secondhand); Auto parts; Car accessories</li> <li>• Sales of new condominiums/houses; Secondhand condominiums/houses; Rental; Home improvement applications</li> <li>• Commercial banks; Regional banks (including second-tier regional banks); Internet banks; Others (regional banks, shinkin banks, Japan Agricultural Cooperatives, etc.); Internet securities companies and Internet mixed securities companies; Consumer finance</li> <li>• Life insurance; Non-life insurance</li> <li>• Other services not included in the above sub-segments (various reservation services, public sporting tournaments, car rentals, CtoC auctions, etc.)</li> </ul>

Note: Except for Financial Services, the amount included in EC is the purchase amount for the relevant industry segment, paid for by the purchaser. In the Financial Services segment, Banking/Securities includes fees, and Insurance includes premiums.



## BtoC EC: Merchandise Categories included in each Segment and Values included in Market Size (1)

The following table describes typical merchandise categories from each industry segment, and the values included in market size.

Industry segment	Merchandise genre typical of segment	Values included in market size
PC and Related Goods	PCs, printers, scanners, toner, memory, HDD, media, etc.	• Value of sale
Home Electrical Appliances	White ware such as refrigerators and washing machines, DVD recorders, digital cameras, flat screen TVs and other digital home electrical appliances, audio equipment, driers, game consoles, etc.	• Value of sale
Travel	Travel ticket reservations, accommodation reservations, tour applications, etc.	• Value of booking/application
Entertainment	Tickets for events, cinemas, theater seat reservations, game software, DVDs and video software For PCs: wallpaper, distribution of still images and video, fortune-telling, etc. For mobile phones: wallpaper, distribution of still images and video, fortune-telling, standby displays, ringing melodies, game downloads, etc. For PCs/mobile phones: online games	• Value of booking/sale • Value of sale (download charge) • Aggregate of information fee between value of sale (download charge) and monthly charge • Aggregate of monthly usage fee
Books and Music	Books, magazines, photo books, comics, mooks, dictionaries and illustrated books, maps, etc. Electronic books, electronic comics, news distributions, online photo books, electronic maps, etc.  CDs, cassettes, records Music distribution, “chakuuta-furu” and “chakuuta” musical ringtones (for mobile phones)	• Value of sale • Aggregate of information fee including value of sale (download charge) and monthly charge • Value of sale • Aggregate of information fee including value of sale (download charge) and monthly charge
Clothing and Accessories	Western/Japanese clothes, underwear, shoes, bags, hats, etc. Accessories (precious metals, precious stones, etc.)	• Value of sale

## BtoC EC: Merchandise Categories included in each Segment and Values included in Market Size (2)

(continued)

Industry Segment	Merchandise categories typical of segment	Values included in market size
Food Products and Beverages	Perishable foods, processed foods, vacuum-packed foods, drinking water, carbonated drinks, alcoholic beverages, etc	• Value of sale
Medical, Cosmetic and Health Food Products	Medicines, basic cosmetics, makeup cosmetics, perfumes, foods for specified health uses, foods with nutrient function claims, health foods (supplements), etc.	• Value of sale
Hobbies, Miscellaneous, Furniture and Other	Sporting goods, outdoor goods, musical instruments, toys, pets, pet products, eyeglasses, sunglasses, lighting fixtures (lamps, fluorescent lights), stationery, convenience goods, household furniture, flowering plants, bouquets, paintings, prints, garden supplies, bicycles, hobby products (go, shogi, anime figurines, etc) Other merchandise not classified in any category (personal seals, magnets, etc)	• Value of sale
Automotive	New vehicles, secondhand vehicles (two-wheel, four-wheel)  Car products (parts, accessories, car navigation systems, car stereos)	• Value of contracts that arise from requests for materials or bookings for test drives which are made on the Internet • Value of sale
Real Estate	Sale of new homes (detached homes, condominiums)  Sale of secondhand homes (detached homes, condominiums), rental property brokers  Home improvement applications	• Value of contracts that arise from requests for materials or bookings for inspections which are made on the Internet • Agency commission generated by contract or contracted amount, based on a similar definition to sales of new homes • Value of home improvements

## BtoC EC: Merchandise Categories included in each Segment and Values included in Market Size (3)

(continued)

Industry Segment	Merchandise categories typical of segment	Values included in market size
Financial (Banking/ Securities, etc.)	Specialist Internet banking/securities, commercial banks, regional banks, second-tier regional banks, shinkin banks, credit unions, labor credit associations, Internet mixed securities companies Consumer finance	<ul style="list-style-type: none"> <li>• Internet banking and online trading fees</li> <li>• Fees for personal loans applied for on the Internet</li> </ul>
Financial (Life/Non-life Insurance)	Life insurance and non-life insurance products	<ul style="list-style-type: none"> <li>• Total premiums earned for insurance applied for on the Internet</li> </ul>
Other Various Services	Public sports events (Japan Racing Association (horse), National Association of Racing (horse), keirin bicycle racing, motorboat racing, auto racing) Internet auctions Applications for prepaid discount ETC Roadside service Restaurant reservations, golf course reservations Test applications Rental car bookings For mobile phones: position information services, weather forecasts, disaster information, etc.) Lotteries, TOTO (sports lottery) etc.	<ul style="list-style-type: none"> <li>• Value of purchased betting tickets</li> <li>• Auction usage fees</li> <li>• Value of prepaid amounts</li> <li>• Value of roadside service application fees</li> <li>• Value of reservations</li> <li>• Test fee</li> <li>• Value of reservations</li> <li>• Total of monthly fee and information charges</li> <li>• Value of sale</li> </ul>

# BtoC EC: Market Size in 2004: Overall Picture

The size of the BtoC EC market in 2004 was 5.643 trillion yen, an increase of approximately 28%. In particular, there were high growth rates in such industry segments as: Books and Music; Financial; Medical, Cosmetic and Health Food Products; Home Electrical Appliances; Other Various Services; and Travel.

## Market Size of BtoC EC in 2004

Goods/Services Segment	Previous Survey (2003)	
	Market Size (billion yen)	EC Rate*1
PCs and Related Goods	235	16.0%
Travel	474	3.4%
Entertainment	330	2.8%
Books and Music	138	4.4%
Clothing and Accessories	164	1.3%
Food Products and Beverages	219	0.5%
Hobbies, Misc. and Furniture	249	2.0%
Automotive	603	4.8%
Real Estate	912	2.1%
Other Goods	247	1.0%
Financial	215	0.7%
Financial (Banking/ Securities, etc.)	146	11.9%
Financial (Life/Non-life Insurance)	69	0.2%
Other Various Services	638	0.8%
Total	4,424	1.6%

Goods/Services Segment	Previous Survey (2003)		
	Market Size (billion yen)	EC Rate*1	Year-to-year comparison
PCs and Related Goods	262	16.6%	111.5%
Home Electrical Appliances *3	119	1.8%	141.7%
Travel	661	4.7%	139.5%
Entertainment*2	421	3.5%	127.6%
Books and Music*2	207	6.7%	150.0%
Clothing and Accessories	183	1.4%	111.6%
Food Products and Beverages	299	0.7%	136.5%
Medical, Cosmetic and Health Food Products *3	222	4.1%	144.2%
Hobbies, Miscellaneous, Furniture and Other *3	342	1.3%	132.6%
Automotive	656	5.2%	108.8%
Real Estate	1,049	2.4%	115.0%
Financial	321	1.0%	149.3%
Financial (Banking/ Securities, etc.)	211	16.8%	144.5%
Financial (Life/Non-life Insurance)	110	0.4%	159.4%
Other Various Services	901	1.6%	141.2%
Total	5,643	2.1%	127.6%

\*1 The EC Rate is the ratio of the value of the EC market to the aggregate of final consumption, housing investments, etc. in the household sector.

\*2 In 2004, the "chakuuta" musical ringtone service was switched from Entertainment to Books and Music. In the same way, the figures for 2003 have also had the value of the "chakuuta" market size switched from Entertainment to Books and Music.

\*3 From 2004, Other Products has been categorized into Home Electrical Appliances and Medical, Cosmetic and Health Food Products; and other goods and services (Other) has been included in Hobbies, Miscellaneous, Furniture and Other. Also, due to the change to the Hobbies, Miscellaneous, Furniture and Other segment in 2004, the previous year comparison figure for this segment has been calculated by adding the Other portion of the 2003 Other Products figure to the 2003 Hobbies, Miscellaneous and Furniture figure.

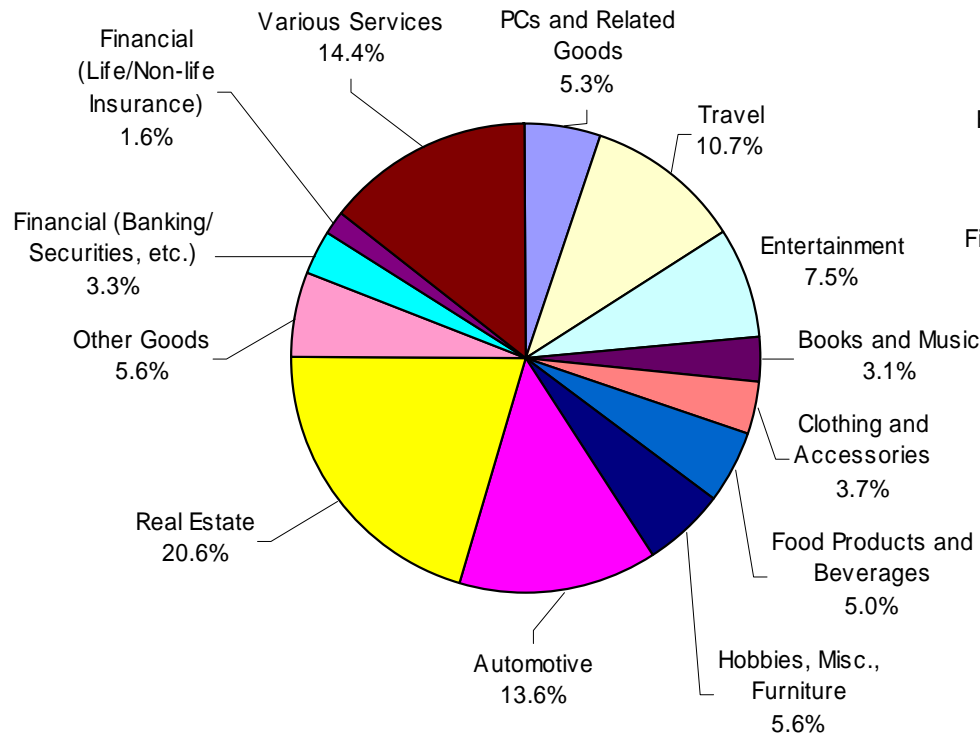


Indicates segments that increased to more than 140% of the previous years.  
\* Travel has been regarded as 140%.

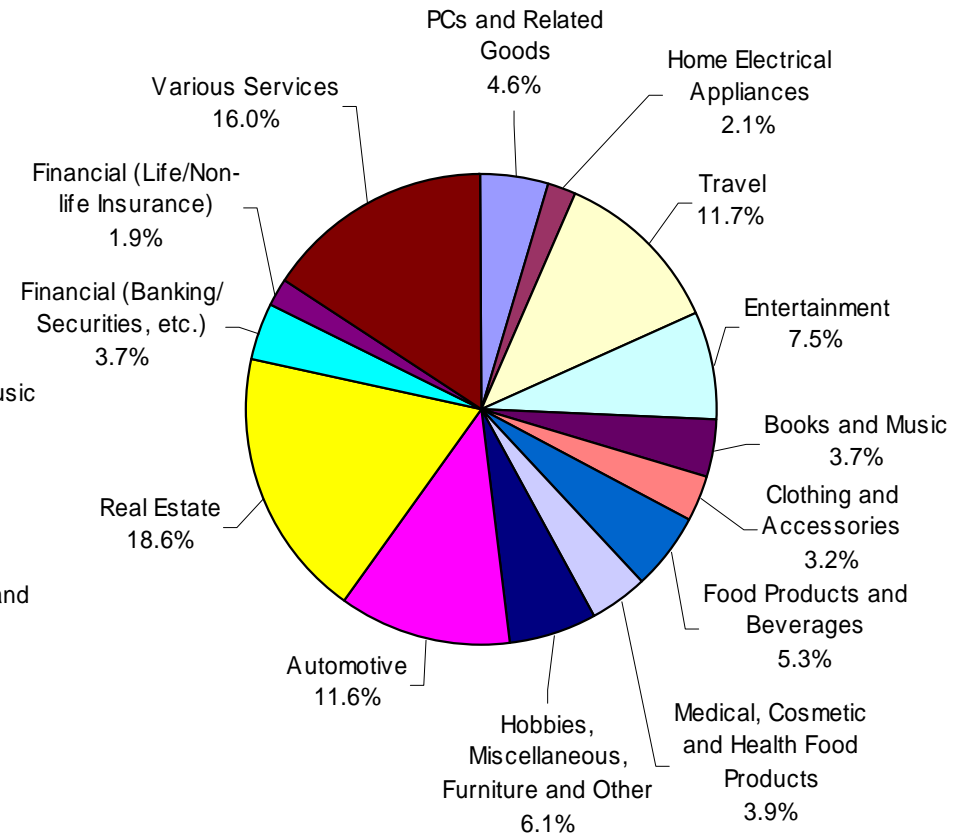
# BtoC EC: Segment Distribution Trends

Compared to 2003, in 2004 there were declines in the proportions occupied by Real Estate and Automotive. This resulted in slight increases to the ratios of the Other Various Services; Travel; Financial; and Hobbies, Miscellaneous, Furniture and Other segments.

2003 (Market size: 4.424 trillion yen)



2004 (Market size: 5.643 trillion yen)



\*1 In 2004, the "chakuuta" musical ringtone service was switched from Entertainment to Books and Music. In the same way, the figures for 2003 have also had the value of the "chakuuta" market size switched from Entertainment to Books and Music.

\*2 From 2004, Other Products has been categorized into Home Electrical Appliances and Medical, Cosmetic and Health Food Products; and other goods and services (Other) has been included in Hobbies, Miscellaneous, Furniture and Other.

# BtoC EC: Market Size of Mobile Commerce in 2004: Overall Picture

The mobile commerce market reached 971 billion yen in 2004 or 17.2% of the total EC market, an increase of approximately 25% over the previous survey. In particular, there were high growth rates in the segments of Books and Music; Clothing and Accessories; Other Various Services; and Financial, etc.

## Market Size of Mobile Commerce in 2004

Goods/Services Segment	Previous Survey (2003)	
	Market Size (billion yen)	Mobile proportion <sup>*1</sup>
PCs and Related Goods	7	3.0%
Travel	55	11.6%
Entertainment	195	59.1%
Books and Music	39	28.3%
Clothing and Accessories	19	11.6%
Food Products and Beverages	28	12.8%
Hobbies, Misc., Furniture	45	18.1%
Automotive	20	3.3%
Real Estate	18	2.0%
Other Goods	25	10.1%
Financial	17	7.9%
Various Services	309	48.4%
Total	777	17.6%

Goods/Services Segment	Current Survey (2004)		
	Market Size (billion yen)	Mobile proportion <sup>*1</sup>	Year-to-year comparison
PCs and Related Goods	5	1.9%	71.4%
Home Electrical Appliances <sup>*3</sup>	2	1.7%	-
Travel	63	9.5%	114.5%
Entertainment <sup>*2</sup>	208	49.5%	106.7%
Books and Music <sup>*2</sup>	72	34.8%	184.6%
Clothing and Accessories	34	18.6%	178.9%
Food Products and Beverages	23	7.6%	82.1%
Medical, Cosmetic and Health Food Products <sup>*3</sup>	36	16.2%	-
Hobbies, Miscellaneous, Furniture and Other <sup>*3</sup>	55	16.1%	-
Automotive	22	3.4%	110.0%
Real Estate	20	1.9%	111.1%
Financial	21	6.5%	123.5%
Various Services	410	45.5%	132.7%
Total	971	17.2%	125.0%

\* The former other Goods segment has not been included in the comparison, since it has been recategorized into Hobbies, Miscellaneous, Furniture and Other. Home Electrical Appliances and Medical, Cosmetic and Health Food Products.

\* In 2004 there was an apparent decrease in the value of the mobile commerce markets for PC and Related Goods and Food Products and Beverages. This is the result of more sophisticated estimations being conducted, due to an increase in the ratio of amounts identified by individual companies as mobile commerce compared to the previous year. (Please note that it is not an indication of a market contraction.)

\*1 Mobile proportion: The mobile proportion represents the proportion of mobile commerce in the e-commerce market in each segment.

\*2 In 2004, the "chakuuta" musical ringtone service was switched from Entertainment to Books and Music. In the same way, the figures for 2003 have also had the value of the "chakuuta" market size switched from Entertainment to Books and Music.

\*3 From 2004, Other Products has been categorized into Home Electrical Appliances and Medical, Cosmetic and Health Food Products; and other goods and services (Other) has been included in Hobbies, Miscellaneous, Furniture and Other.

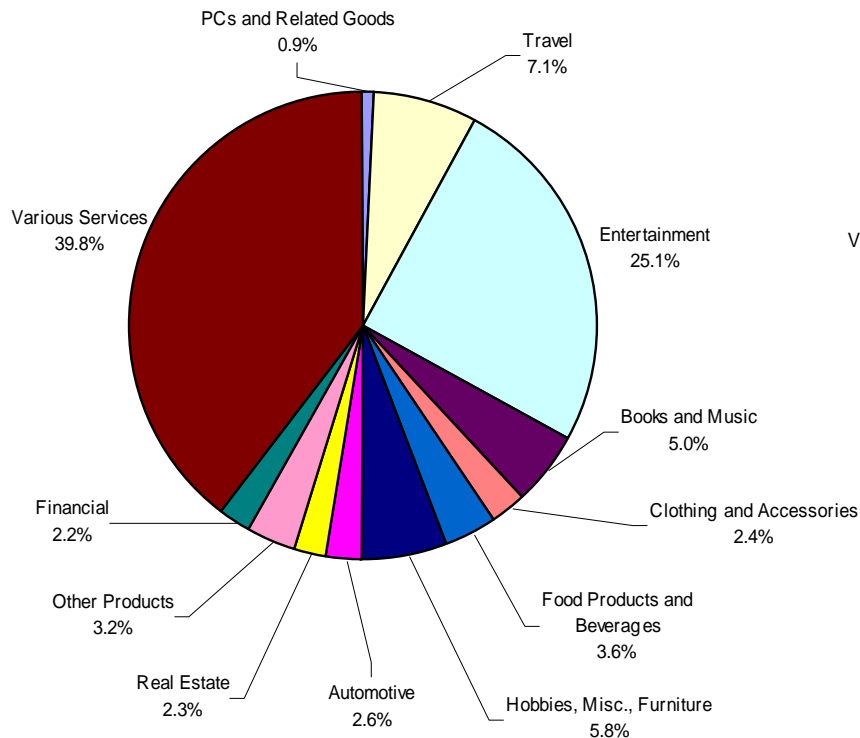


indicates segments that increased to more than 120% of the previous year.

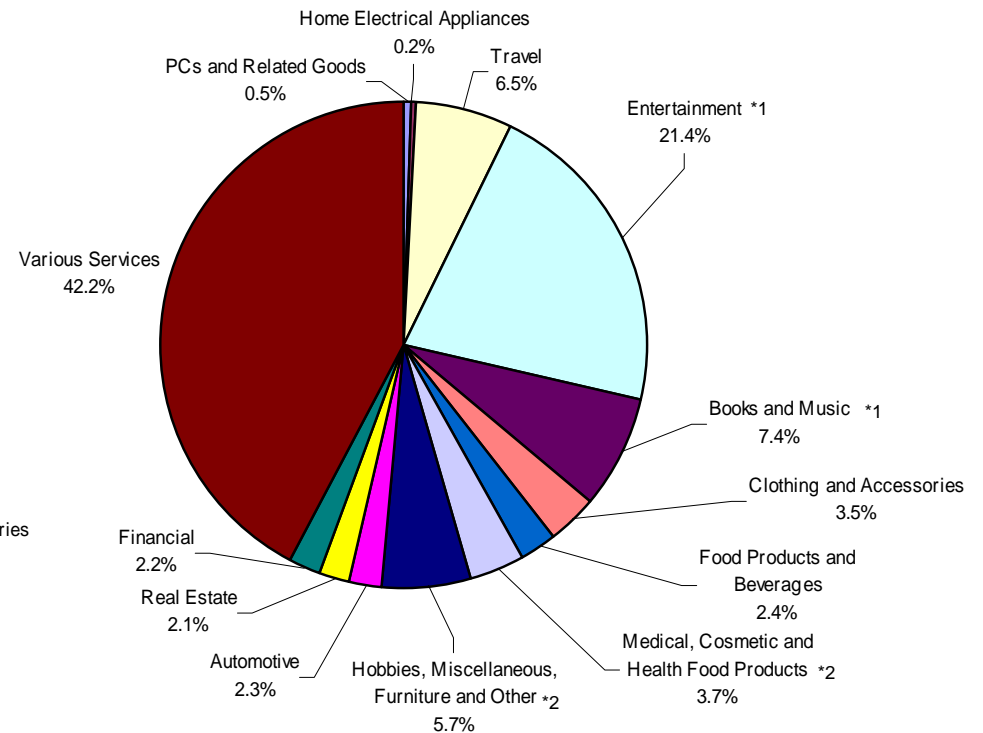
# BtoC EC: Segment Distribution Trends in Mobile Commerce (1)

Looking at the distribution of industry segments, 2004 is characterized mostly by a continued dominance from 2003 by Other Various Services, which includes public sport events, but also by Clothing and Accessories. There has been a decrease in the proportion accounted for by Entertainment, because “chakuuta” musical ringtones were switched from Entertainment to Books and Music.

2003 (Market size: 777 billion yen)



2004 (Market Size: 971 billion yen)



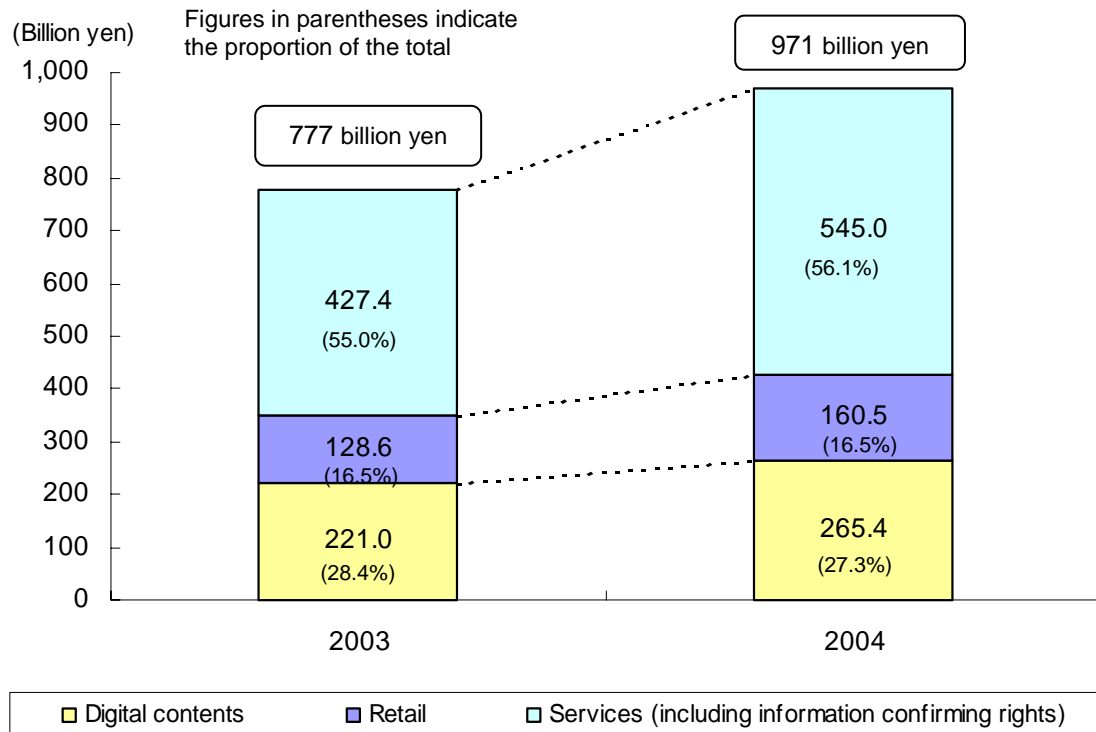
\*1 In 2004, the “chakuuta” musical ringtone service was switched from Entertainment to Books and Music. In the same way, the figures for 2003 have also had the value of the “chakuuta” market switched from Entertainment to Books and Music.

\*2 From 2004, Other Products has been categorized into Home Electrical Appliances and Medical, Cosmetic and Health Food Products; and other goods and services (Other) has been included in Hobbies, Miscellaneous, Furniture and Other.

## BtoC EC: Segment Distribution Trends in Mobile Commerce (2)

Comparing the proportions of digital content (including ringing melodies, chakuuta musical ringtones, chakuuta-furu high-quality musical ringtones, standby displays, and games), retail and services in mobile commerce in 2004, we can see that the share of services is rising.

### Segment Distribution Trends in Mobile Commerce in Digital Contents, Retail, and Services



- Overview of the Digital Content Market
  - Consumer support is high for “chakuuta-furu” high-quality musical ringtone services, despite only commencing in November 2004.
  - Game services (mostly download) for mobile terminals were also comparatively successful.
- Overview of the Mobile Retail Market
  - There was continued support for “Click and Catalog” (services combining paper media and mobile terminals for order/purchase) which was promoted aggressively by major catalog retailers.
  - Among some users in the Clothing and Accessories segment, there is a rising proportion of “pure mobile-phone EC,” which brings together on the mobile terminal the complete sequence of operations from browsing to ordering.
  - Individual mobile phone carriers are also continuing development of collection agency services, in conjunction with retail by.
- Overview of the Services Market
  - In the Travel segment the “Ticketless Boarding Service” offered by major airlines, utilizing mobile phones is growing in popularity.
  - Mobile betting on public sport events is showing steady growth.



## BtoC EC: Trends and Characteristics in 2004 (1)

In PC and Related Goods, major medium-sized mass retailers are faring well by extending their sales through the provision of value-added services rather than focusing solely on price. In Home Electrical Appliances, in addition to this factor, increasing demand for home electrical appliances and other factors contributed to the expansion of the EC market. In the Travel segment, inroads are being made by the “Ticketless Boarding Service” offered by major airlines, which utilizes mobile phones.

Segment	BtoC EC Market size Figures in parentheses show mobile commerce (billion yen)	Characteristic trends in 2004
<b>PC and Related Goods</b>	262 (5) [y/y: 111.5%]	<ul style="list-style-type: none"> <li>Major medium-sized mass retailers, which had been under pressure from small to medium-sized stores which were offering out low prices, have expanded sales by providing additional EC services, such as free shipping and shipping within 24 hours.</li> </ul>
<b>Home Electrical Appliances</b>	119 (2) [y/y: 141.7%]	<ul style="list-style-type: none"> <li>EC sales have performed well, in line with the significant increases in across-the-board sales of home electrical appliances, such as flat screen TVs and DVD recorders.</li> <li>There have been increasing improvements to sales of white goods by retailers who provide confirmation on the Internet of installation schedules at the time of sale.</li> </ul>
<b>Travel</b>	661 (63) [y/y: 139.5%]	<ul style="list-style-type: none"> <li>Airline company and hotel websites that promote direct sales and accommodation bookings continue to perform well. <ul style="list-style-type: none"> <li>In particular, mobile phone based “Ticketless Boarding Services,” which are offered by major airlines are proving popular among consumers.</li> </ul> </li> <li>While small, medium and large-sized hotel and <i>ryokan</i> inn operators are still keen to attract customers directly through accommodation bookings on their own websites, there is a growing expectation that the general accommodation sites will attract the bulk of customers.</li> </ul>

## BtoC EC: Trends and Characteristics in 2004 (2)

In Entertainment, services for electronic tickets for events are continuing to make inroads. Growth of the Books and Music segment is accelerating, as “chakuuta” musical ringtones were switched from Entertainment to this segment, and the new “chakuuta-furu” high-quality musical ringtone service was also launched. The Clothing and Accessories segment has seen continued strong performances by companies which have succeeded in mobile retail, through their strategies of careful refinement of their target customers.

Segment	BtoC EC Market size Figures in parentheses show mobile commerce (billion yen)	Characteristic trends in 2004
<b>Entertainment</b>	421 (208) [y/y: 127.6%]	<ul style="list-style-type: none"> <li>• “Chakuuta” and “chakuuta-furu” musical ringtones, which had been included in the Entertainment segment up until the 2003 survey, have been switched to the “Books and Music” segment. As a result, the Entertainment segment showed no prominent growth, but, overall, maintained its strong performance.</li> <li>• Efforts for electronic ticketing for events made further inroads.</li> <li>• Online games fared well in digital contents produced for PCs.</li> </ul>
<b>Books and Music</b>	207 (72) [y/y: 150.0%]	<ul style="list-style-type: none"> <li>• In retail, Internet retail shops continued to perform well.</li> <li>• With the introduction of “chakuuta” high-quality musical ringtones, the distribution of music entered a new stage.</li> </ul> <p>* The “Chakuuta” musical ringtone service, which had been included in the Entertainment segment up until the 2003 survey, will be included in the Books and Music segment from this 2004 survey.</p>
<b>Clothing and Accessories</b>	183 (34) [y/y: 111.6%]	<ul style="list-style-type: none"> <li>• Use of mobile phones as purchase/order terminals, linked with such media as conventional printed catalogs and fashion magazines, has become mainstream.</li> <li>• “Pure mobile-phone EC” is also proving popular in the F1* and Teen** (particularly female) consumers groups.</li> </ul>

\* F1: females aged 20-34 years old

\*\* Teen: males and females aged 13-19

## BtoC EC: Trends and Characteristics in 2004 (3)

In the Food Products and Beverages, and the Hobbies, Miscellaneous, Furniture and Other segments, “only one shop” businesses which market themselves as the only place to purchase a particular good/service, are faring well. In the Medical, Cosmetic and Health Food Products segment, the booms in health foods and supplements are contributing to the expansion of the EC market.

Segment	BtoC EC Market size	Characteristic trends in 2004
	Figures in parentheses show mobile commerce (billion yen)	
<b>Food Products and Beverages</b>	299 (23) [y/y: 136.5%]	<ul style="list-style-type: none"><li>• Major stores (including department stores and catalog retailers) and medium-sized EC shops performed strongly.</li><li>• Small and medium-sized stores, which stock regional produce, seasonal gifts, or “only one” products unavailable elsewhere, maintained a strong showing.</li><li>• During this survey, the value of CO-OP Internet orders was confirmed.</li></ul>
<b>Medical, Cosmetic and Health Food Products</b>	222 (36) [y/y: 144.2%]	<ul style="list-style-type: none"><li>• As consumers become more health-oriented, health food products and supplements are booming. In light of this, EC sales of the relevant industry segments are rising.</li></ul>
<b>Hobbies, Miscellaneous, Furniture and Other</b>	342 (55) [y/y: 132.6%]	<ul style="list-style-type: none"><li>• Steady performances were maintained by catalog retailers with their “Click and Catalog” sales system combining catalogs, PCs and mobile phones.</li><li>• In small and medium-sized EC shops, consumers showed strong support for “only one shops” which cater for a wide range of consumer interests and tastes.</li></ul>

## BtoC EC: Trends and Characteristics in 2004 (4)

In the big-ticket Automotive and Real Estate industry segments, there was a decline in the proportion of sales arising from Internet requests by consumers for catalogs. As a result, there has been a slight slowdown in the growth of the EC market.

Segment	BtoC EC Market size Figures in parentheses show mobile commerce	Characteristic trends in 2004
	(billion yen)	
<b>Automotive</b>	656 (22) [y/y: 108.8%]	<ul style="list-style-type: none"><li>• It has become more common for consumers to gather information on the Internet when purchasing vehicles. Furthermore, with the increase in the amount of information being provided on the Internet, even without submitting requests for catalogs, consumers are now able to acquire any necessary information.</li><li>• Sales are favorable for products which do not require technical ability to install (such as car accessories and supplies).</li><li>• However, there has also been an increasing number of shops on the Internet which provide positive support for consumers so that they can bring in their vehicle and have installed any products requiring installation (such as car audio).</li></ul>
<b>Real Estate</b>	1,049 (20) [y/y: 115.0%]	<ul style="list-style-type: none"><li>• Individual agencies are focusing efforts on the provision of information on the Internet, and an increasing number of consumers are utilizing the Internet when searching for properties.</li><li>• In this survey, the value of the market is mostly comprised of contracted amounts for properties which have been sold as a result of arranging inspections or requesting catalogs on the Internet. According to individual questionnaires completed by companies, approximately 30% of purchasers use the Internet for information when buying properties.</li></ul>

## BtoC EC: Trends and Characteristics in 2004 (5)

In the Financial industry segments, in addition to a continued increase in the number of users of online trading, there was an expansion in sales of life insurance and non-life insurance products on the Internet. These are both contributing to the expansion of the Financial EC market. In Other Various Services, in addition to the continued rise of Internet betting on public sport events, the growth of the ETC electronic toll prepaid discount service was also confirmed. As a result, the market saw significant growth.

### BtoC EC Market size (billion yen)

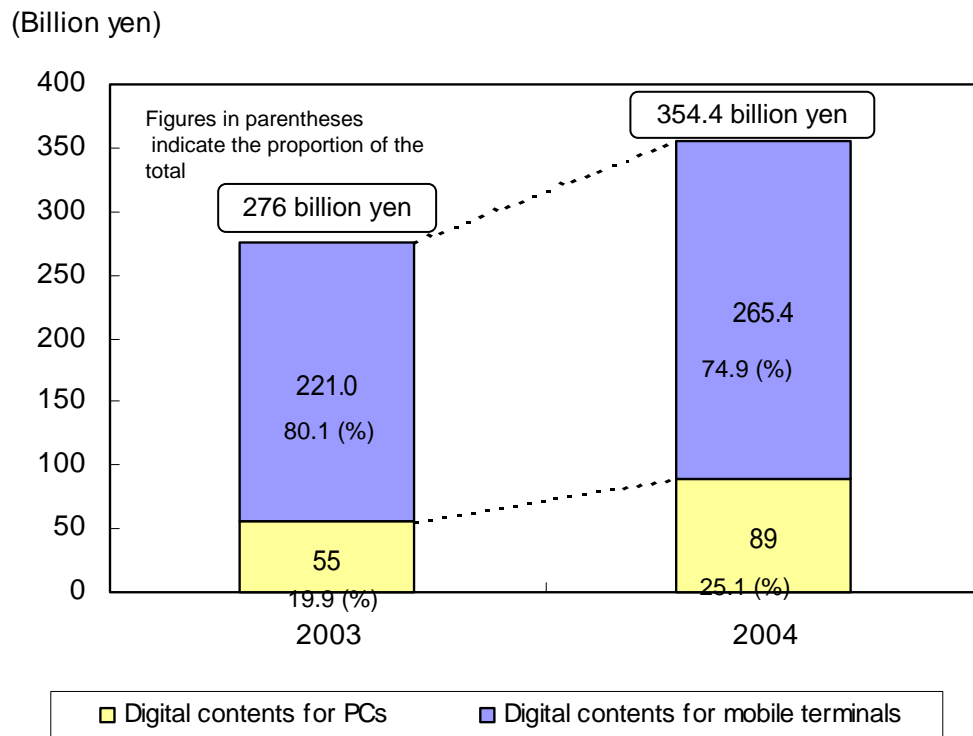
Segment	Figures in parentheses show mobile commerce	Characteristic trends in 2004
<b>Financial (Banking/ Securities, etc.)</b>	211 (Total: 21)* [y/y: 144.5%]	<ul style="list-style-type: none"> <li>On the back of greater capital liquidity brought about by a favorable stock market and revisions to legislation, there has been an increase in awareness of Internet securities as an option for building individual asset portfolios.</li> <li>Ahead of the impending retirement rush set to start in fiscal 2007, there are visible signs of services being provided which include a point of contact for in-company financial services targeted at people in the higher age bracket.</li> </ul>
<b>Financial (Life/ Non-life Insurance)</b>	110 (Total: 21)* [y/y: 159.4%]	<ul style="list-style-type: none"> <li>Purchases of insurance products on the Internet are becoming more commonplace, as individual companies strive to make sales of insurance products simple, easy to understand and more suitable for selling on the Internet, and as they strive to develop devices for navigating their websites.</li> <li>Since the appeal of low prices, possible only on the Internet, meets the needs of consumers, we have begun to see consumers who will obtain product descriptions, etc, in the usual manner, and then make purchases on the Internet.</li> </ul>
<b>Other Various Services</b>	901 (410) [y/y: 141.2%]	<ul style="list-style-type: none"> <li>This survey was able to identify ETC prepaid discount services, rental cars, education and other sub-segments, which had been unidentifiable in earlier surveys.</li> <li>The survey was again able to identify Internet betting on public sport events, and we can see that the healthy growth of this sector is continuing.</li> </ul> <p>* In Various Other Services, only amounts which were identified as EC amounts have been accumulated.</p>

\* Aggregate of Financial segments, including banking and securities

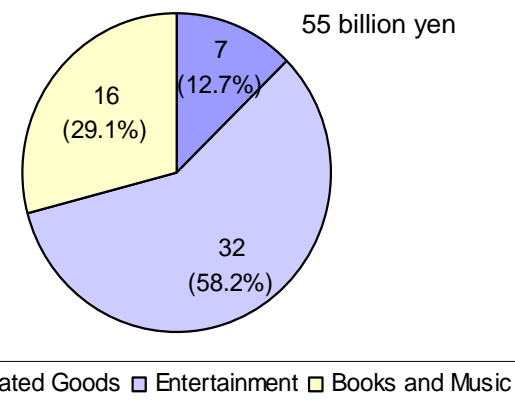
# BtoC EC: Trends and Characteristics in 2004 (Digital Content)

With regard to digital content in BtoC EC, for the past several years, digital content centered on mobile phones (including ringing melodies, chakuuta musical ringtones, standby displays, and games) have led the market; but with the surge in the broadband environment, in 2004, there was an increase in the online gaming population, and an increasing share of the market has been accounted for by digital content for PCs, such as video downloads.

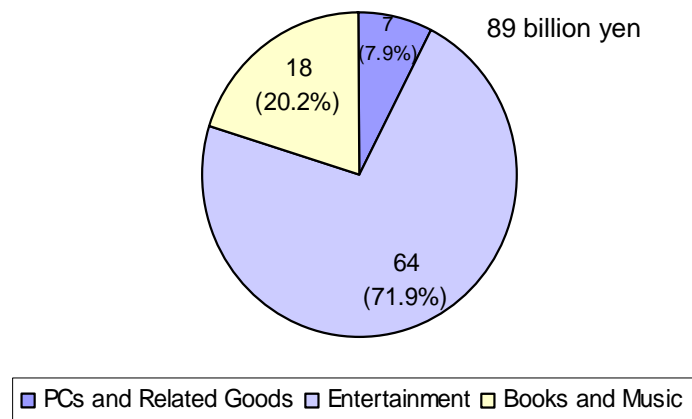
## Digital Content Distribution Ratio Trends for PCs and for Mobile Terminals



## Breakdown of Digital Content for PCs by Industry Segment (2003)

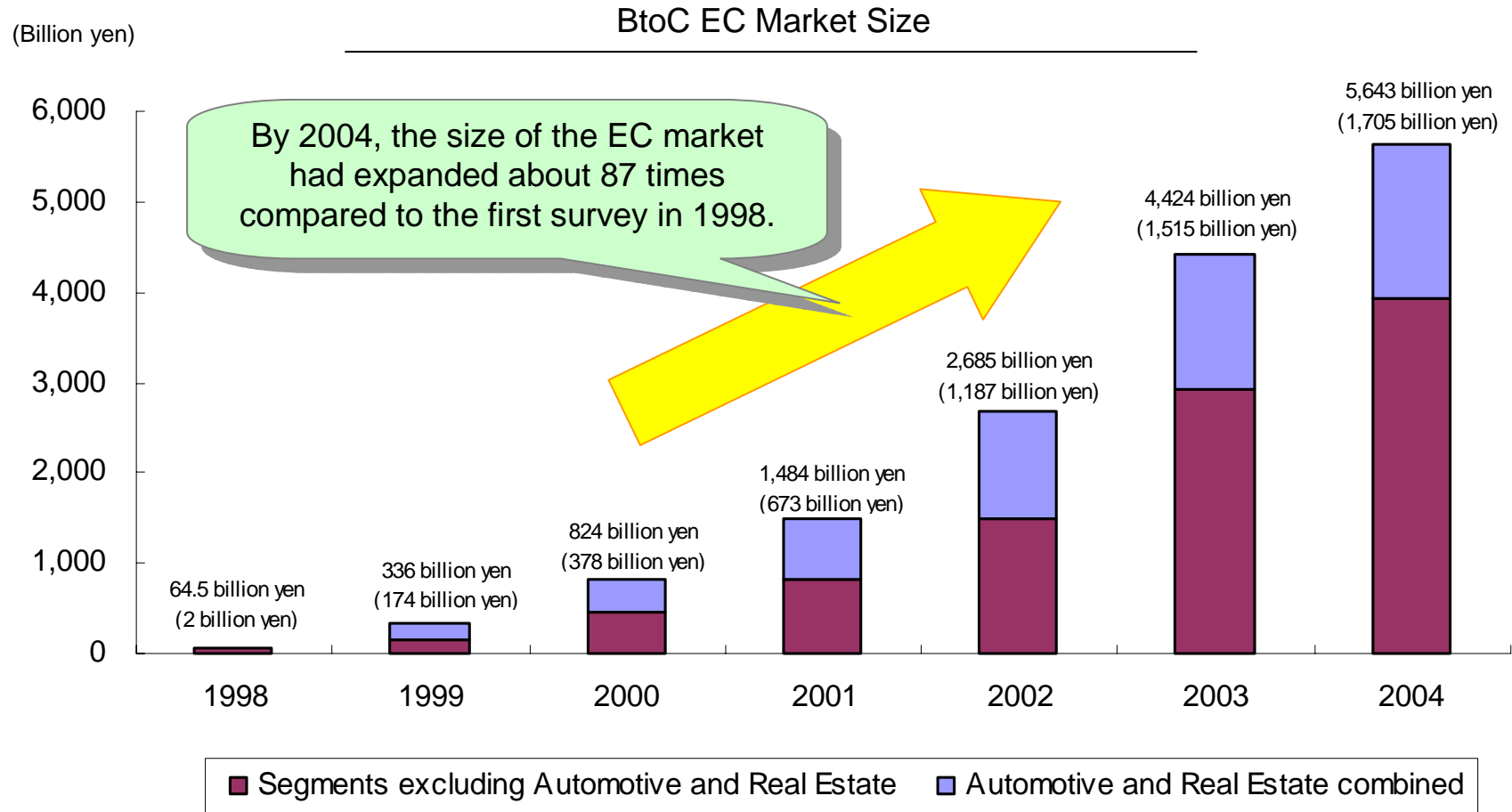


## Breakdown of Digital Content for PCs by Industry Segment (2004)



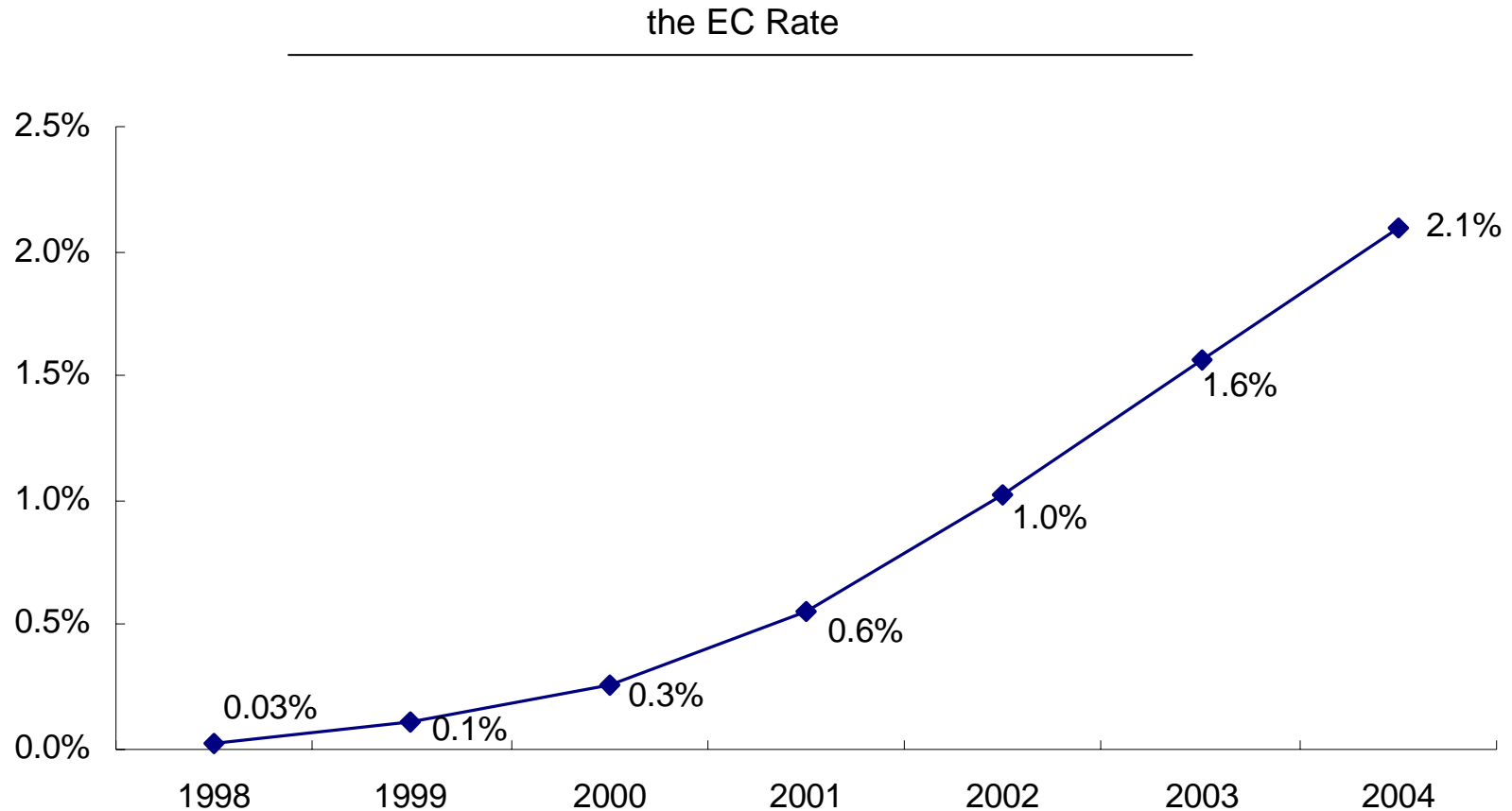
## BtoC EC: Transition of Market Size

The size of the BtoC EC market expanded to 5.643 trillion yen in 2004, or to about 87 times the size of the 64.5 billion yen market in 1998, when the first survey on the EC market was conducted. Despite this, the rate of growth has slowed somewhat compared to 2003.



## BtoC EC: EC Rate

Looking at the of EC rate (proportion of EC transactions to total transactions) : in the first survey in 1998, the EC rate was 0.03%, but by 2004, it had reached 2.1%.



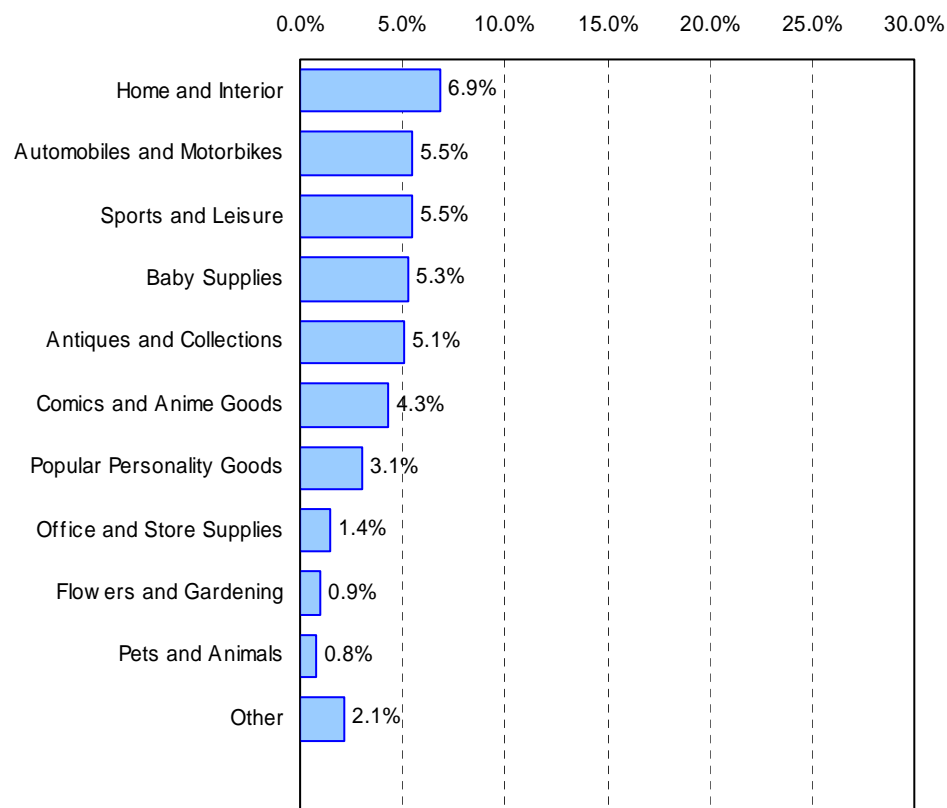
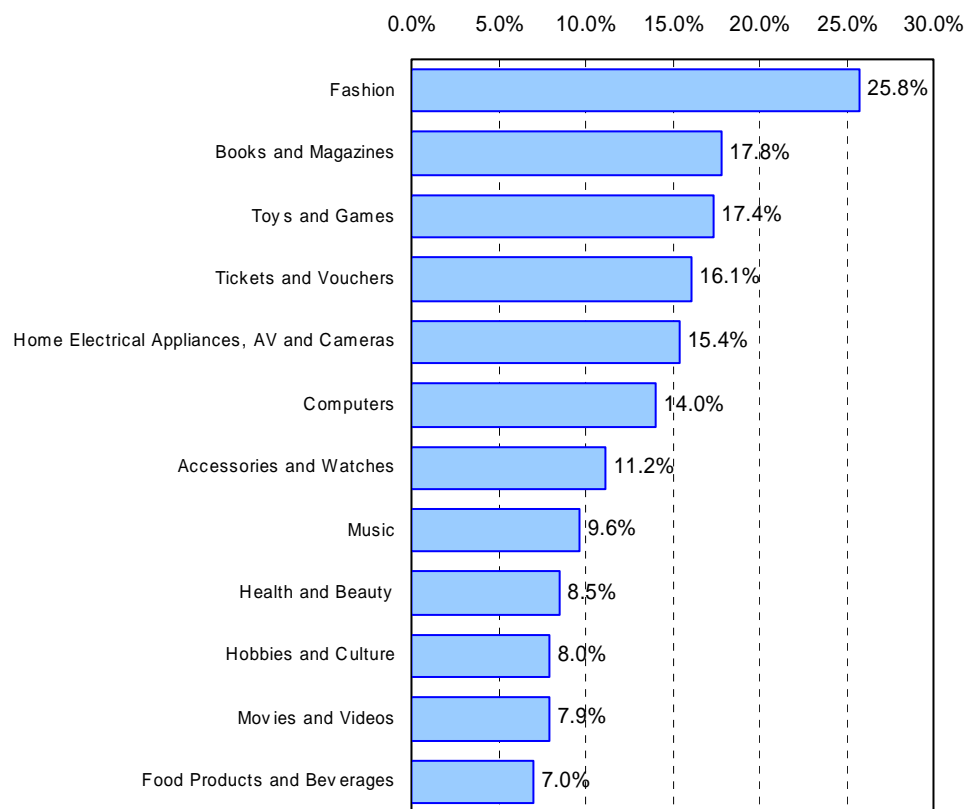


# CtoC EC: Participation in Internet Auctions by Industry Segment

Results of the web-based questionnaire to consumers on their use of the Internet show that their participation in Internet auctions by industry segment\* is as follows. Transactions are conducted across a wide range of segments, but, use of Internet auctions is most active in such segments as Fashion, Books and Magazines, and Toys and Games.

## Participation in Internet Auctions by Industry Segment

Internet auction participant base (N=1,268)



\* Questions were asked of participants in Internet auctions regarding the segments in which they had actually made successful bids during the period between December 2004 and March 2005.