

Scope of Business

Business overview

Consumer Business Group

1. Products and services

The Consumer Business Group (CBG) is mainly engaged in providing mobile communication services to individual users. The Company offers a wide range of products, including SIM cards for postpaid subscribers, as well as SIM and reloadable cards for prepaid subscribers that can be used for making/receiving calls and other services, such as voice, data, short messaging service (SMS), multimedia and video messaging.

Target customers	Service category	Description	Highlights
Individual consumers	Mobile	Voice	Basic telecommunication voice services, including calling and receiving calls from fixed-line and mobile phones
		Data	Value-added services, including voice mail, call forwarding, call waiting, conferencing, SMS, roaming, call barring, video calls, multimedia and content services (e.g., ringtones, games, screensavers, video clips, video streaming), and internet access using GPRS/3G/HSDPA transmission
	IDD	International direct dialing services	

2. Revenue breakdown by service

Unit: NT\$m

Item \ Year	2012	
	Amount	%
Telecom service	54,669	87%
Handset sales and others	8,234	13%
Total	62,903	100%

3. New products and services

- (1) Voice services: Continue to roll out innovative rate plans to better meet customers' different calling patterns and personal demands.
- (2) Value-added services: Focus on mainstream smart devices, develop a diverse range of services and content to enrich the app store and provide customers with a more pleasant user experience.

4. Operating status

(1) Postpaid products and services

To offset the impact of the NCC's mandatory tariff cuts on voice revenue, the Company focused on improving the percentage of mid-to-high rate plan subscribers and sales of smart devices to raise its average revenue per user (ARPU). By the end of 2012, mid-to-high rate plan users as a percentage of total subscribers had increased by 5 ppts.

The Company also has excellent loyalty programs in place to secure its customer base and minimize churn rates. With the aid of business intelligence tools and its direct marketing network, the Company used market segmentation to target and provided customers with services that better match their needs. For instance, for high ARPU customers, the Company has an exclusive program called "myVIP", which offers a credit card program that allows customers to earn rebates based on their phone bills.

(2) Prepaid products and services

In addition to the campaign offering free text messages to target the youth market since 2011, the Company launched a discount promo for on-net and off-net calls, as well as mobile internet packages, thereby providing more choices for pre-paid card customers. This helped boost the Company's number of prepaid subscribers by 17% in 2012.

The Company also aggressively promoted value-added services (VAS) usage and adoption rate. Selected VAS services were offered for free as a promotion for recharge cards and prepaid cards. Non-SMS VAS revenue for prepaid business rose 45% in 2012.

(3) Value-added services

The Company saw a significant increase in VAS revenue in 2012, surging 39% from a year ago. In particular, revenue from mobile internet access rose 67%, thanks to high-quality mobile internet services and flexible data rate plans, as well as a growth in the popularity of smartphones, tablets, 3.5G data cards and netbooks. These helped attract a large number of mobile internet users and also encouraged existing subscribers to use value-added services.

In 2012, the Company introduced an innovative VAS product, myVideo, a platform offering movies, drama, concerts, cartoons and travel programs, as well as a user-friendly interface supporting 3G and WiFi to meet smartphone and tablet users' demand for TV on the go.

Home Business Group

1. Products and services

TFN Media (TFNM), a subsidiary of the Company, holds a cable television system operator's license and a Type II telecommunication license. TFNM runs its business under the brand name TWM Broadband. Its main products and services cover analog cable TV service, high-definition digital cable TV service, high-speed cable broadband service, Super MOD (Super multimedia on demand) service, internet TV, and Connect TV etc. Combining the group's resources, from mobile and fixed-line to innovative cloud technology, HBG provides digital convergence services across "four screens and a cloud" to home users. Its subsidiary, Win TV Broadcasting, a TV production company, operates the "momo family channel" and owns distribution rights to a large number of outstanding domestic and foreign TV content, enabling it to provide subscribers with a wide range of digital audiovisual entertainment services.

Service category	Products / Services	Description
Pay TV	Analog cable TV	Uses high bandwidth coaxial cable to transmit a wide range of TV channels and programs to home TVs.
	Digital cable TV	TWM Broadband's CATV networks transmit domestic and international digital TV channels to subscribers' homes; subscribers can use the set-top box provided by TWM Broadband to view high-definition digital video content.
Broadband internet access	Cable fiber-optic broadband internet access	Provides high-speed internet access service via a hybrid fiber/coaxial (HFC) network deployed by the CATV system operator in combination with new-generation DOCSIS 3.0 broadband internet access technology.
Content distribution	Analog and digital TV channels	Distributes high-quality domestic and foreign TV contents on both analog and digital TV services by licensing the broadcasting rights of these channels to other CATV system operators and video service platforms.
Digital home service	Super MOD (multimedia on demand) service	The first in Taiwan to provide high-definition on-demand video, audio and interactive applications/content by combining video on demand, internet TV and digital TV onto a single platform. Subscribers can access Super VOD contents on their TVs, computers, smartphones and tablets anytime, anywhere.

2. Revenue breakdown by service

Unit: NT\$mn

Item \ Year	2012	
	Amount	%
Pay TV service	4,243	69%
Cable broadband service	1,074	18%
TV content distribution and others	805	13%
Total	6,122	100%

3. New products and services

(1) High-definition digital TV channels and programs:

TWM Broadband provides the hottest high-definition digital TV channels and the latest programs to increase digital TV penetration rate.

(2) 100Mbps high-speed fiber-optic internet access service:

TWM Broadband has launched reasonably priced 100Mbps services and, together with enriched digital content, Connect TV and various added services, etc., has met customers' demand for high-speed bandwidth, high definition video streaming and applications, thereby attracting a large number of new subscribers and increasing customer satisfaction.

(3) Super MOD service:

TWM Broadband has taken the lead with the launch of its Super MOD service, which offers a wide range of high-definition digital content and TV applications, allowing users to view popular video on demand (e.g., TV dramas, movies, sports, kids and other video clips), play online games, access the latest fashion trends and take online courses via TV in order to increase its digital TV service subscriber number and penetration rate.

(4) Innovative digital convergence services:

TWM Broadband has utilized the Company's extensive mobile communications, fixed-line network and cable TV service resources, while continuously monitoring new trends and developments in the global digital convergence services industry, to enable subscribers to enjoy the benefits of digital convergence services anytime, anywhere.

Enterprise Business Group

1. Products and services

The Enterprise Business Group (EBG) offers enterprise customers integrated information and communications technology (ICT) solutions and mobile/fixed network services under the brand name "TWM Solution."

Service category	Description
Fixed-line voice	EBG provides integrated voice solutions, including Enterprise E phone, local calls, long-distance calls, international calls, Centrex, 080 domestic toll-free service, audio conference, intelligent network services (e.g., 0209 services) and ISR, enabling users to save on calling costs. TWM Solution continues to develop advanced technologies to enhance reliability and provide instant response to ensure customer satisfaction.
Fixed-line data	EBG offers different types of circuits for information transmission, including leased line, Metro Ethernet, IP virtual private network (VPN), international private leased circuit (IPLC) and ADSL VPN. These circuits and bandwidth for data transmission among terminals enable users to build a communication network and expand their business opportunities.
Internet	EBG offers internet access via leased line, Metro Ethernet, ADSL, FTTx and dial-up. EBG also provides internet data center (IDC) services, including co-location, web hosting, super mail and domain name registration. EBG's IDC services not only cover carrier-level facilities, but also management/maintenance services for customers.
Mobile	EBG offers regular voice services, mobile VPN, intelligent transportation system (ITS), BlackBerry enterprise solution, mobile audio conference and MVPN data service.
Systems integration and cloud services	EBG provides video conference services, information security services (Security Operation Center), network management, and infrastructure as a service (IaaS).

2. Revenue breakdown by service

Unit: NT\$m

Item	Year	2012	
		Amount	%
Mobile service		4,491	43%
Fixed-line service		3,779	36%
ISR and others		2,121	21%
Total		10,391	100%

3. New products and services

- (1) Information security manager: New functions include scanning for potential flaws in webpage application codex to avoid information leaks.
- (2) Cloud information security service: Providing physical and virtual system protection, guarding against numerous types of attacks, without the need of separate procurements to lower complexity, centralizing and enhancing control at a lower cost.
- (3) Cloud e-mail backup: An efficient way to search, retrieve and save e-mails, reducing the cost of storing and strengthening the preservation of valuable information.
- (4) Cloud storage: A networking service platform that enables customers to access data anytime, anywhere.

- (5) Cloud data center managing service: This system provides instant networking behavior monitoring and reports flow and equipment discrepancy automatically, enabling CEOs to easily monitor the status without the knowledge of network instruction.

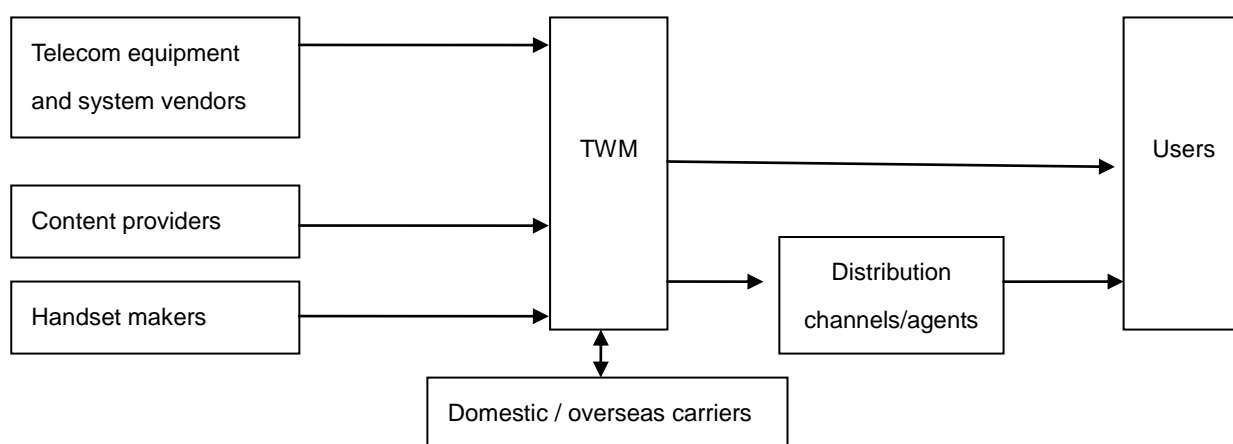
Industry overview

Consumer Business Group

1. Industry status and development

The three leading players continue to dominate Taiwan's mobile telecommunication market. However, competition from smaller operators offering free on-net calls and other promotions has increased. The NCC has been implementing mandatory mobile tariff reductions on certain 3G tariffs since 2010, which has weighed on the voice revenue of mobile operators.

2. Industry value chain



3. Product development trends and competitive landscape

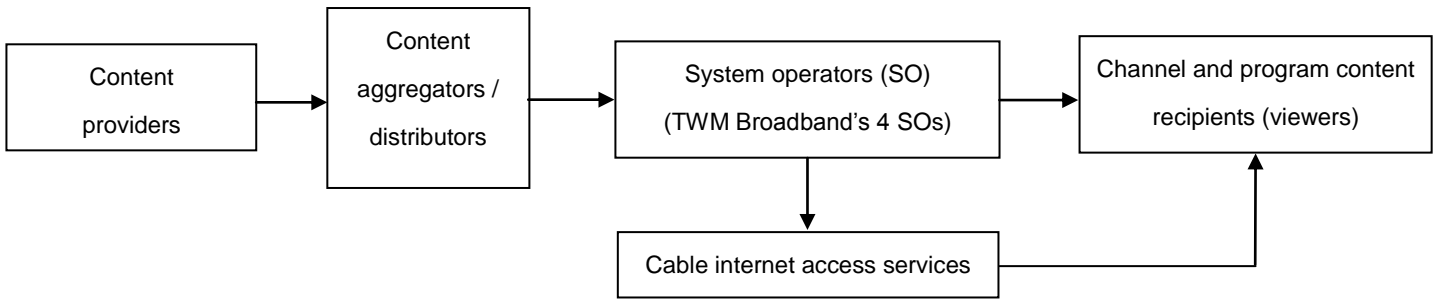
The operators are seeking to expand the mobile broadband market. A variety of new rate plans for data services, combined with new terminal devices and new VAS, have been introduced to stimulate subscriber take-up. This should be an important future revenue growth driver. As for the prepaid segment, competition is intensifying due to pricing competition and new entrants.

Home Business Group

1. Industry status and development

Cable TV has become a must-have video platform, but it faces challenges from alternative services such as IPTV, internet TV and other emerging media that have successively entered the market. The cable TV industry must digitalize aggressively and continue to provide innovative digital TV value-added services to attract traditional cable TV subscribers to switch to digital TV. With the most number of high-definition channels in the nation, a unique Super media on-demand service, leading cloud technology and upgraded 870MHz cable network to provide premium HD programs and high-speed cable broadband services, TWM Broadband expects to further attract subscribers and expand its footprint in the industry.

2. Industry value chain



TWM Broadband has the advantage of controlling “last mile” access to customers. TWM Broadband aims to take the lead in vertical integration in order to build up its core competitiveness and explore new business opportunities in the age of digitalization.

3. Product development trends and competitive landscape

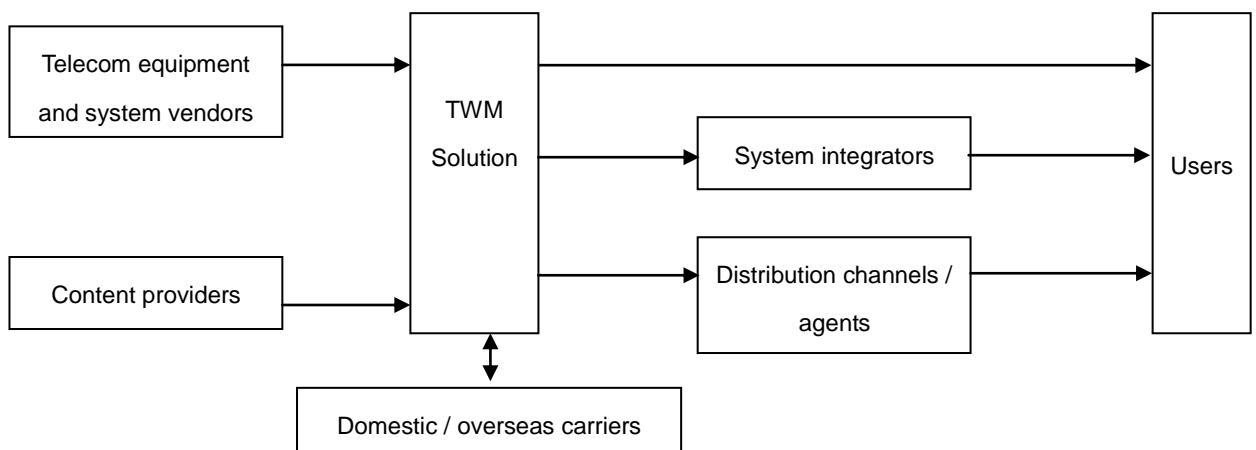
Despite the intense competition in the broadband internet access market, HBG’s cable internet service subscriber number has continued to grow rapidly. To fend off competition, TWM Broadband will provide super broadband internet access service of 100Mbps and above and develop more innovative digital value-added services to let subscribers enjoy a whole new experience in home entertainment.

Enterprise Business Group

1. Industry status and development

According to NCC statistics, there were 83 Type I telecommunication providers, including four fixed-line operators, six mobile operators and 66 circuit leasing operators; and 457 Type II telecommunication providers, including international simple resale (ISR), internet service providers (ISP), VoIP and other value-added service providers. All these have resulted in keen competition. And as the trend toward digital convergence expands, the boundaries between telephone, cable TV, wireless and PC are getting increasingly blurry, intensifying cross-industry competition.

2. Industry value chain



3. Product development trends and competitive landscape

NCC statistics show that Chunghwa Telecom has a virtual monopoly of the telecom market, accounting for 95.57% of local network service revenue, 70.08% of long-distance network service revenue and 54.61% of international network service revenue. FTTx is the most popular type of broadband internet access in Taiwan, with an increasing number of users choosing higher-speed services. Since CHT has the “last mile” advantage, other ISPs find it hard to effectively compete with the firm, except for cable broadband operators. Revenue from data circuit and internet access/value-added services is expected to rise slightly in the future, while revenue from fixed voice services is seen to continue declining.

Along with the rising popularity of smart devices and as network infrastructure matures, the government is planning to invest in the transformation of the information/telecommunication industry into a cloud computing industry. Carriers planning to continue promoting enterprise customer applications will contribute to the building of this cloud center and providing various cloud application services. Hence, cloud, mobile internet and ICT services will be the main revenue growth drivers in the future.

Research and development expenditure

Investment in research and development and its ratio as a percentage of total revenue are shown in the table below. For 2013, the Company plans to spend NT\$966mn on the research and development of more advanced technologies designed to increase customer satisfaction, which in turn should boost value-added service revenue and overall operations growth.

Year	2011	2012	2013 (As of February 28)
R&D expense (NT\$'000)	563,461	547,615	98,513
As a % of total revenue	0.91%	0.81%	0.80%

Major research and development achievements

Project name	Description
3G customer relationship management (CRM) platform	Designed customized CRM modules to analyze customers' usage pattern and enhance customer relationship.
Automatic 3G network quality measurement app and backend platform	Developed apps to automatically measure 3G network quality and backend platform to generate geo-location web reports based on the measurement results.
Radiation analysis, simulation and measurement of experimental femtocells	Analyzed femtocell architecture, radiation field specifications, and radio wave propagation; conducted radiation field simulation and measurements of experimental femtocells.
LTE new technology research	Research on LTE Inter-RAT (Inter Radio Access Technology) handover mechanism. Analysis of LTE Advanced coordinated multipoint transmission and reception technology. Research on LTE Advanced system to enhance integrated throughput for carrier aggregation and interference management and suppression.
Fixed-line billing system consolidation	Consolidated the operations flow of the fixed-line business and simplified related services by centralizing the data and customer profiles from different billing systems into a unified one.
Customer-facing trouble ticket management system (CF-TTMS)	Developed CF-TTMS system to support all business lines and provide a customer-centric trouble ticket management system for triple/quadruple play. Improved customer service quality and constructed a scalable and extendable infrastructure to meet future business needs.
TWM repair utility system (TRUS)	Developed the TRUS platform to support TWM multi-site repair service operations, enhanced maintenance quality and efficiency, increased customer satisfaction and achieved cost reduction.
TWM warehouse management system (TWMS)	Built TWMS system to support multi-site warehouse environment, streamlined warehouse operation processes, maximized product placement strategy, controlled inventory, and increased logistics efficiency.
Mobile handset version of TWM Brand Portal	Set up a mobile handset version of TWM Brand Portal to provide services such as service application, payment, rate plans, billing and roaming.
IT reusable assets	Developed IT reusable assets to avoid system duplication, save on development costs and raise productivity and quality (e.g., workflow engine integrated with e-commerce and EDAS - Enterprise Data Analysis System application schedule center to facilitate execution).
Direct store credential-recognition system	Optical character recognition technology automatically captures customer information on their Taiwan identity card or national health insurance card, simplifying data entry process and improving data accuracy.
Customer order management system	Developed a system that is NGOSS (next generation operations system and software) / SOA (service oriented architecture) compliant, but also integrates TWM's in-house IT work flow engine to quickly respond to rapid business changes. Built a smart queuing mechanism to process consecutive orders by the same user to reduce customer waiting time and improve service quality. Built a bundle-order mechanism to better serve customers.
M+	M+ is an instant messaging service. Customers – both TWM and non-TWM users – can download the app from the App market. This service allows users to send messages by text, picture or voice, and provides a unique "Send Gift" service that the receiver can exchange at 7-11/FamilyMart.
myVideo	A new streaming system to provide video on demand services for smartphone, tablet and PC users, who can also access this through their Facebook account.
Infrastructure as a Service (IaaS)	IaaS provides several virtual machine service packages. Enterprises have a choice of hardware capacity, internet bandwidth and OS / DB (OS: Windows 2003/2008, CentOS/Ubuntu; DB: MS SQL and MySQL) depending on their requirements.

Sales development plans

Consumer Business Group

1. Short-term plan

- (1) To continue supplying faster and more convenient mobile internet service, and develop value-added services for all types of mobile platforms to enhance the mobile internet experience for customers.
- (2) To further expand distribution channels and develop standard service flow from the consumer's point of view to provide them the best service experience.
- (3) To offer a greater variety of mobile phones, accessories and other 3C products; and build up a one-stop shop that meets all TWM customers' digital needs.

2. Long-term plan

The Company aims to provide subscribers with a variety of digital convergence services. The focus will be on the following:

- (1) Establishing a "quadruple-play" platform that integrates mobile communication, fixed-line, broadband internet access and cable TV services to give the Company a lead over its competitors in offering digital convergence services in Taiwan.
- (2) Leveraging machine-to-machine (M2M) technology into TWM products and services to integrate mobile handsets, high-quality mobile networks and cloud computing technology so as to expand its service range and support the development of innovative, profitable business models.
- (3) Increasing the number of company stores and providing extensive training to franchise shops to enhance service quality and availability, and providing a wider variety of services and customer experience to attract customers as well as fulfill customers' mobile needs.

Home Business Group

1. Short-term plan

- (1) TWM Broadband will continue to optimize its network infrastructure in those regions where it is already operating cable TV systems, and to provide high-definition digital content and VOD to set the foundation for its digital services.
- (2) TWM Broadband has commercially launched its 100Mbps super high-speed internet access service bundled with high-definition digital TV and Super MOD services in 1H13 to raise the penetration rates in cable broadband and digital TV services, as well as the subscriber mix of high speed broadband service and the number of DTV customers.

2. Long-term plan

In line with the Executive Yuan's goal of raising the digital TV penetration rate to 100% by 2014, TWM Broadband

aims to become a one-stop shop for home digital services by integrating high-definition digital content, multiple-viewing terminal devices, high-speed fiber-optic broadband service and cloud technology, allowing families and individual subscribers enjoy the benefits of “four screens and a cloud” (i.e., mobile phones, PCs, tablets and TVs), leading the video entertainment of overall households to be digitalized and becoming the best digital convergence service provider.

Enterprise Business Group

1. Short-term plan

The popularity of smart devices has gradually changed enterprise communication patterns. To meet the needs of mobile offices, the Company will not only provide mobile applications, but also better cloud computing services after a 26,000 sq.m. cloud internet data center (IDC) officially opens in the second half of 2013. In addition, the Company will promote mobile virtual private network (MVPN) services through TWM channels to help reduce corporate cost and enhance operating efficiency.

Given the increasing demand for cloud computing services, transnational bandwidth traffic is also growing rapidly. The Company has invested in the Tam-Fu underwater cable project, which will establish a direct link across the Taiwan Strait, to strengthen its position in Asia.

2. Long-term plan

EBG's vision is to expand its enterprise services from network-centric to ICT-centric solutions and services by implementing the following:

- (1) Grow revenue from cloud computing and mobile applications.
- (2) Raise sales productivity and expand the small-and-medium enterprise market segment by integrating channels.
- (3) Improve the international business division's operating efficiency by increasing direct peering coverage, managing quality and reducing international IP cost.

Customer satisfaction

To create the best experience for customers, TWM conducts annual customer satisfaction surveys by telephone to better understand their needs and expectations. Customers are asked to evaluate call quality, rates, bills, customer hotline service, store service, value-added services, and the Company's website among others. The findings from these polls are used as a reference to set new objectives and improve service quality.

Customer satisfaction key indicators	2010	2011	2012
Overall satisfaction	3.7	3.7	3.8
Call quality	3.7	3.6	3.7

Customer hotline service	4.3	4.3	4.5
Store service	4.1	4.0	4.1
Note: Customer satisfaction is rated based on the following scores: Very satisfied (5), Satisfied (4), Neither satisfied nor dissatisfied (3), Dissatisfied (2) and Very dissatisfied (1).			

Market and Sales Overview

Market analysis

Consumer Business Group

1. Main products and service areas

The Company provides mobile services nationwide, covering Taiwan and the outlying islands of Kinmen and Matsu.

2. Market status

By the end of January 2013, the penetration rate for mobile subscribers had reached 123%. To attract users, smaller operators offered free on-net calls and other promotional deals, resulting in intense competition in the post-paid voice market. The rapid innovations in mobile devices and the rising demand for mobile internet and value-added services further encouraged newcomers to venture into this market.

3. Competitive advantages

(1) Better customer mix

In 2012, the Company succeeded in improving its subscriber base structure. The percentage of low usage subscribers fell by 5 pts from a year ago, while the percentage of mid-to-high usage subscribers continued to increase.

(2) Market leader in wireless broadband

In 2005, the Company became the first mobile communication operator in Taiwan to launch 3G services, and in 2007, it rolled out Taiwan's first 3.5G service. Subscribers enjoy flexible rate plans, high-quality mobile handsets, and a wide range of value-added services. By the end of 2012, the Company had a 3G subscriber base of over 5.7 million users, who contributed more significantly to value-added service ARPU than 2G subscribers and have become the main driver of VAS revenue growth.

4. Opportunities and challenges

Positive factors

- (1) With faster data transmission speeds, lower prices for smart devices and data rate plans, and the emergence