

Chapter 4 Operational Highlights

Macro Environment

Consumer spending on communication and broadcasting related services is largely influenced by the macroeconomic environment. According to the Directorate-General of Budget, Accounting and Statistics (DGBAS), private consumption growth slowed to 1.49% in 2012 from 3.13% a year ago, as rising price levels, a weak stock market and unpredictable national policies dampened consumer confidence. Although growth in the emerging markets should help prop up the global economy this year, private consumption growth is expected to remain mild at 1.86% due to continuing global economic uncertainties.

Overall Operating Results

In 2012, in spite of the impact of the National Communications Commission's (NCC) mandatory tariff cuts on mobile operators' voice service revenue, the Company still saw a 21% YoY rise in consolidated revenue, as it strived to grow wireless data, cable broadband and other promising businesses. In terms of profitability, despite increased handset subsidies to boost smartphone penetration, the Company's net income grew 9% YoY due to improved revenues and profitability from its telecom and cable businesses, as well as full-year profit contribution (versus 5.5 months a year ago) from momo.

Performance by division

Unit: NT\$m

	CBG	HBG	EBG
Brand name	Taiwan Mobile	TWM Broadband	TWM Solution
Services	<ul style="list-style-type: none"> ● Voice and data mobile services for consumers ● Mobile to international direct dialing (IDD) services 	<ul style="list-style-type: none"> ● Pay TV services ● Cable broadband services ● Others 	<ul style="list-style-type: none"> ● Voice and data mobile services for enterprises ● Fixed-line services ● International simple resale (ISR) services
2012 revenue*	62,903	6,122	10,391
As a % of group revenue	64%	6%	11%
2012 EBITDA*	20,477	3,238	3,393
As a % of group EBITDA	73%	12%	12%

	Mobile business	Cable business	Fixed-line business
Market position	One of the top three mobile operators among five players in the market, with a market share of around 27% in terms of mobile service revenue	Fourth-largest multisystem operator (MSO), covering about 11% of the households in Taiwan	A market share of around 2% for ADSL/FTTx business. Second-largest internet service provider (ISP), with a market share of 6% (including 170K cable broadband subscribers from its cable business)
Subscriber base	7,012K mobile subscribers	580K CATV subscribers 170K cable broadband subscribers	Around 100K ADSL/FTTx internet access users

* Source: Financial reports

Operating Results Review

Consumer Business Group

Mandatory tariff cuts imposed by the NCC weighed on mobile voice revenue in 2012. However, with mobile data revenue surging 39% from a year ago – accounting for 33% of overall mobile service revenue – mobile service revenue still grew 5% YoY. This, together with handset sales, lifted CBG's total revenue by 8% from a year ago.

Home Business Group

HBG's 2012 revenue rose 4% from a year ago due to revenue growth from its pay TV (including analog and digital channels) and cable broadband businesses. Growth is attributed to an expanding subscriber base, higher digital TV penetration rate, increased channel leasing and higher adoption rate for high-speed cable broadband services. EBITDA climbed 7% YoY due to expanded economies of scale.

Enterprise Business Group

EBG's 2012 revenue grew 5% YoY, largely from an 11% YoY increase in enterprise customers' mobile revenue from a larger customer base. In addition, EBG's 2012 EBITDA rose 22% from a year ago because of rising revenue and strict cost/expense control.

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\$mn

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\$mn

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.

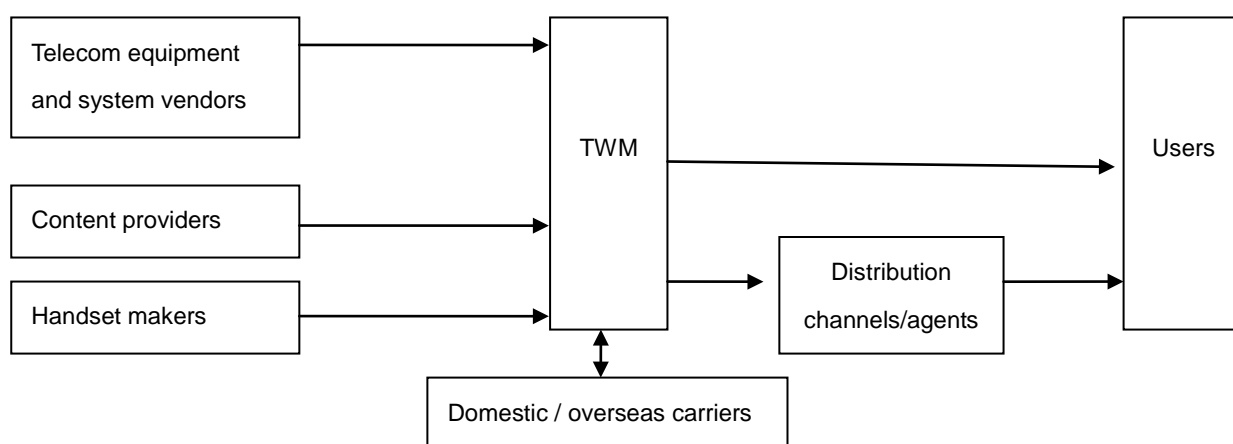
Industry overview

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

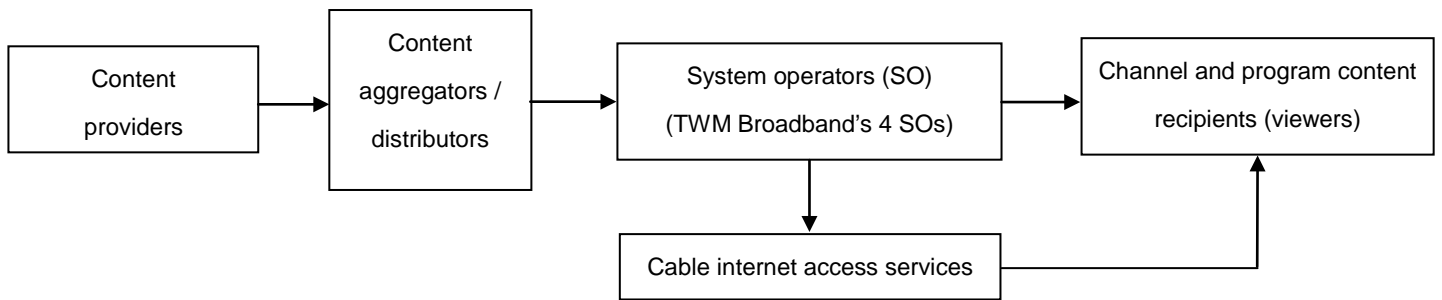
The operators are seeking to expand the mobile broadband market. A variety of new rate plans for data services, combined with new terminal devices and new VAS, have been introduced to stimulate subscriber take-up. This should be an important future revenue growth driver. As for the prepaid segment, competition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

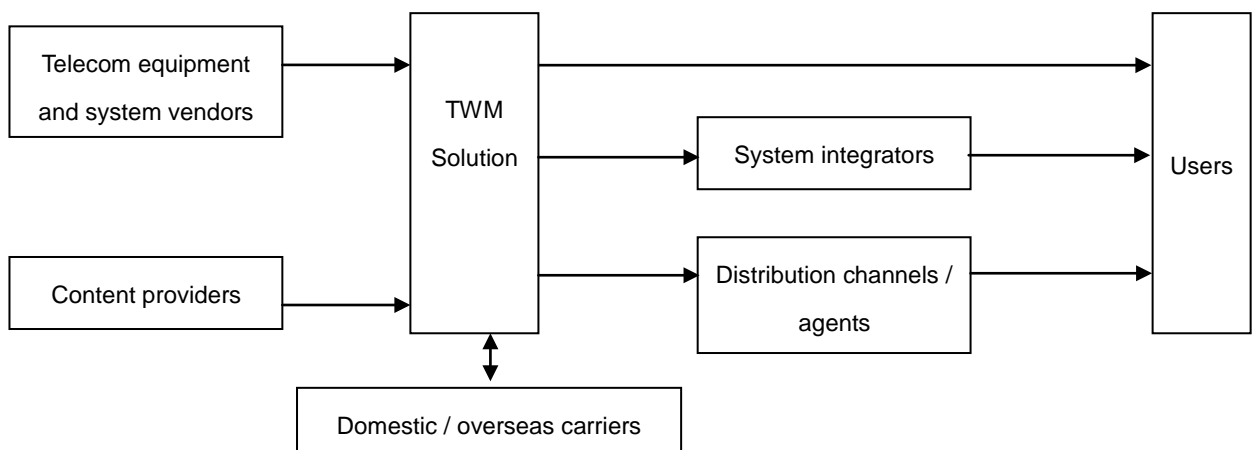
Despite the intense competition in the broadband internet access market, HBG's cable internet service subscriber number has continued to grow rapidly. To fend off competition, TWM Broadband will provide super broadband internet access service of 100Mbps and above and develop more innovative digital value-added 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

of new, varied applications, mobile internet access is rapidly spreading from entrepreneurs and professionals to ordinary consumers, contributing to the rapid growth in non-voice revenue.

- (2) With information technology, communication and media trends converging, mobile operators have played a pivotal role to play in the supply chain.
- (3) Many innovative technologies and business models have been extended to the mobile internet.

Negative factors

- (1) NCC's implementation of mobile termination rate (MTR) cuts from 2013 to 2016 is expected to weigh on future mobile voice revenue.
- (2) The popularity of smart devices has boosted the number of data users and their data usage, but has also increased pressure on carriers' network capacity and planning.

Countermeasures

- (1) The Company has expanded its HSPA+ network to satisfy the customer needs for high-speed internet access and closely monitors LTE technology developments.
- (2) The Company maps out strategies in response to government policy changes and new laws and regulations.
- (3) The Company will continue to introduce innovative value-added services for smartphones to stimulate data service revenue growth and offset the impact of falling voice revenue.

Home Business Group

1. Main products and service areas

TWM Broadband provides cable TV, high-definition digital cable TV, and fiber-optic broadband internet access services. Its main service areas are New Taipei City's Sinjhuang and Sijhih districts, Yilan County and Greater Kaohsiung's Fongshan District.

2. Market status

- (1) Cable TV

Taiwan's cable TV penetration rate has risen steadily over the years, reaching over 60% of households, according to NCC data. Watching TV programs has become a major leisure activity for Taiwanese – one that is relatively unaffected by fluctuations in the economy, ensuring stable market demand.

- (2) High-definition digital cable TV

Digitalization is the future trend for CATV. With the Executive Yuan aiming to lift digital TV's penetration rate to

100% by the end of 2014, business opportunities abound in this market of 6 million households nationwide. TWM Broadband is tapping into this digitalization value chain by offering rich HD content, stable and quality signal, various platforms for viewing TV programs and a new affordable TV set business model to boost digital TV's penetration rate.

(3) Broadband internet access

With the broadband internet access market moving toward high-speed services, the migration of mid-to-low speed users to faster speeds will be the main growth driver for the market. TWM expects to gain share in this market by offering competitive prices and superior quality for its 100Mbps internet access service.

3. Competitive advantages

(1) Implementation of broadband network quality optimization

TWM Broadband introduced network quality assurance management (QAM) to optimize management of its network system and bandwidth to ensure that customers get premium broadband access and the best user experience. Aside from lowering the group's broadband costs, this has helped strengthen TWM's competitiveness in the broadband access market and in facilitating digital convergence.

(2) Continued enhancement of TWM Broadband's strength in fiber-optic broadband cable networks

TWM Broadband will continue to deploy a dense, ring-type fiber-optic backbone network and provide back-up systems for its bi-directional network with advanced DOCSIS 3.0 network technology. TWM Broadband is able to provide 100Mbps or faster high-speed internet access services. Unlike ADSL with its range constraints, cable internet provides lower cost but premium quality super high-speed broadband services.

(3) Strengthening the promotion of Super MOD with enriched content to increase ARPU of digital TV service

Using Super MOD's open platform, system collaborator, such as CATV system operators, mobile/WiMax operators, digital content providers and internet service providers, are able to create a long-tail effect with low initial investment and shortened time to market. TWM Broadband aims to increase the variety and quantity of Super MOD content and adopt a triple-play – broadband, digital TV and Super MOD – bundled service to increase its subscriber base and ARPU.

(4) Taiwan Mobile Group's integrated resources facilitate development of new, innovative digital convergence products and services

TWM Broadband's resources cover mobile communication, fixed network, CATV, ISP and channel content. The integration of these resources, together with the Taiwan Mobile Group's extensive technical support, as well as sales and marketing resources, forms the core of TWM Broadband's competitive advantage in the household market.

(5) Strategic alliance with core industry players to create new business opportunities

TWM Broadband has teamed up with Sakai SIO, the most advanced large-screen LED manufacturer, to launch 60" TVs made by Hon Hai Precision Ind. Co., Ltd. Not only has this helped TWM Broadband acquire a large number of high-definition digital TV and high-speed internet access service subscribers, but it has also created a new business model to promote convergence services. TWM Broadband will continue to seek alliances with other companies to create new business opportunities.

4. Opportunities and challenges

Positive factors

- (1) Government speeding up digitization policy to promote the development of digital TV

Riding on the government's digitization policy push and the launch of its Super MOD service, TWM Broadband promoted its CATV services and facilitated its analog TV customers' switch to digital services, thereby raising its digital TV subscriber numbers and penetration rate. TWM Broadband will further increase its digital TV value-added services to boost its revenue stream.

- (2) High-speed cable internet service has become the mainstream

TWM Broadband has completed upgrading its ring-type fiber-optic backbone network and infrastructure in its operating areas and adopted the latest high-speed cable internet technology version DOCSIS 3.0. It can provide high-speed broadband internet access speeds of 100 Mbps to help it expand its market share, as well as increase customers' loyalty and ARPU.

Negative factors

- (1) There is still a risk that local governments might lower the cap on cable TV fees during their annual review.
- (2) The NCC might support the airing of CATV content on Chunghwa Telecom's MOD, posing a threat to other CATV operators.
- (3) NCC plans to make it mandatory that CATV operators provide at least two set-top boxes to customers for free, which, if passed, would increase operating costs.

Countermeasures

- (1) TWM Broadband has been able to utilize the extensive resources of its parent company (such as technology, marketing, sales and distribution) to promote high-bandwidth internet access services and to market digital convergence services with Taiwan Mobile Group's telecommunication, information and media content services. TWM Broadband's aim is to provide a "one-stop shopping" service that meets all of its customers' needs in order to boost its cable TV, broadband internet access and digital TV subscriber numbers and their contribution to revenue.
- (2) TWM Broadband is using its digital cable TV platform to cultivate Taiwan's cultural and creative industries, enrich the nation's digital channel and connected TV content, and stimulate the development of digital content and innovative connected TV services.
- (3) TWM Broadband seeks to maintain good relations with local governments and communities. With the assistance of Taiwan Mobile Group's extensive resources – such as the Taiwan Mobile Foundation – TWM Broadband sponsors local artistic, cultural and charitable activities, while also subsidizing the cost of network deployment in remote areas, working to bridge the digital divide, and fulfilling its responsibilities as a good corporate citizen, thereby strengthening its corporate image of: "Basing our growth on the local community and reciprocating the benefits to the local community."

- (4) TWM Broadband is closely monitoring developments in the regulatory authorities' policies on digitization and relevant laws and regulations. TWM Broadband will take the initiative in formulating counter measures to deal with changes in the market.

Enterprise Business Group

1. Main products and service areas

EBG mainly offers its products and services in Taiwan, but also provides international services in 253 countries. As of the end of 2012, the company's roaming services covered the following: GSM: 164 countries, 320 networks; 3G: 81 countries, 180 networks; GPRS: 135 countries, 263 networks.

2. Market status

EBG offers enterprise customers voice, internet and data services. Given the rising demand for ICT solutions and services, IP-based applications have become more popular, resulting in steady growth for the domestic telecommunication market.

- (1) Voice service: Fixed lines' local and international calls and average revenue per minute (ARPM) are expected to continue to decline because of rising competition from VoIP and mobile services in recent years and the introduction of new long-distance call rates in 2012.
- (2) Data service: Rising demand for enterprise data access will result in steady growth in IP VPN and Metro Ethernet revenue.
- (3) Internet service: As internet content services boom, enterprise demand for FTTx is fast replacing ADSL service. However, fierce competition will result in moderate revenue growth.
- (4) Mobile service: As the demand for office mobility increases, TWM Solution is helping enterprise customers incorporate various mobile applications – including electronic workflow, commercial intelligence, mobile device management (MDM) and ERP – into their mobile devices. With enterprise users increasingly accessing internet information via their smart devices, mobile voice revenue should benefit from the rising demand for mobile internet services.
- (5) Cloud computing service: As cloud computing technology gradually matures and benefits from government support, operators are actively venturing into cloud computing services and strengthening the software and hardware supply chain. The diverse range of mobile devices and digital content should also boost demand for cloud services, underpinning growth in cloud app subscriber numbers and revenue.

3. Competitive advantages

- (1) Premium brand equity: The Company provides customer-centric quality services. TWM Solution is well connected with the brand of Taiwan Mobile and has won recognition among major enterprises.
- (2) Professional management team and efficient support group: The Company leads the competition in achieving synergies from the integration of group resources, including mobile telephony, fixed network and cable TV

network, with integrated back-office functions to support its frontline operations and provide enterprise customers with exclusive integrated information and communication technology for business expansion.

- (3) Effective sales teams and channels: The Company's direct sales teams and retail chains across the nation are an effective channel for developing and expanding services.
- (4) Expanding resources from international alliances: The Company is the sole Taiwanese member of the Bridge Alliance, the largest mobile alliance in the Asia-Pacific region with a combined customer base of about 340 million.

4. Opportunities and challenges

Positive factors

To increase their efficiency, an increasing number of enterprises are adopting cloud computing technology and mobile applications to save on maintenance expenses for software, hardware and IT personnel and equipment, while freeing them up to focus on their core business. Companies' primary concern in switching to cloud services is "information security," which TWM Solution can guarantee, having obtained ISO 27001 / ISO 27011 certifications – proof that it has passed basic information security standards. TWM Solution also possesses a wealth of mobile and fixed resources to provide one-stop shopping for integrated services. With economic and trade exchanges increasing across the Taiwan Strait, TWM Solution is well-positioned to meet Taiwanese companies' rising telecommunication needs in the Greater China area.

Negative factors

The local loop bottleneck is a major obstacle to fixed-line operators' business expansion, as market leader Chunghwa Telecom continues to dominate with its last mile advantage.

Countermeasures

To maintain its long-term partnership with high data users, the Company provides an excellent enterprise mobile integration program, a new cloud center and cloud management services. Targeting SME users, the Company provides standardized cloud products, helping them to simplify network management and reduce operating costs. Furthermore, the Company is developing more cloud value-added applications to meet customers' diverse needs. .

Main features and production process of major products: Not applicable as the Company is not a manufacturer.

Supply of raw materials: Not applicable as the Company is not a manufacturer.

Major suppliers and customers in the past two years

Major suppliers

Unit: NT\$'000

	2011				2012			
	Company	Amount	% of operating costs	Nature of relationship	Company	Amount	% of operating costs	Nature of relationship
1	Company A	7,509,852	30	Third party	Company A	11,513,972	38	Third party
2	Company B	4,829,922	19	Third party	Company B	5,418,181	18	Third party
3	Taiwan Fixed Network	3,312,417	13	Subsidiary	Taiwan Fixed Network	4,213,680	14	Subsidiary
4	Company C	4,003,111	16	Third party	Company C	3,757,083	12	Third party
	Others	5,552,041	22		Others	5,284,599	18	
	Total	25,207,343	100		Total	30,187,515	100	

Major customers

Unit: NT\$'000

	2011				2012			
	Company	Amount	% of operating revenues	Nature of relationship	Company	Amount	% of operating revenues	Nature of relationship
1	Company C	6,095,559	10	Third party	Company C	5,765,980	9	Third party
	Others	55,823,714	90		Others	61,640,465	91	
	Total	61,919,273	100		Total	67,406,445	100	

Reasons for variation

In 2012, procurement from Company A increased mainly due to purchases of handsets and other 3C products, while leased line service from Company C dropped as TWM turned to Taiwan Fixed Network as part of the group's move to integrate resources.

Production volume in the last two years: Not applicable as the Company is not a manufacturer.

Sales volume in the past two years

	2011				2012			
	Domestic		Overseas		Domestic		Overseas	
	Subscriber number at year end	Revenue (NT\$'000)	Subscriber number at year end	Revenue (NT\$'000)	Subscriber number at year end	Revenue (NT\$'000)	Subscriber number at year end	Revenue (NT\$'000)
Telecom service	6,662,960	55,916,663	--	--	7,012,026	59,042,443	--	--

Human Resources

Employee statistics in the past two years up to date of publication

Year		2011	2012	2013 (as of March 15)	
Number of employees	Consolidated	6,055	6,529	6,491	
	Stand-alone	2,651	2,959	2,929	
Stand-alone	Average age	36.84	36.42	36.51	
	Average years of service	7.22	6.78	6.88	
	Education level	Ph.D.	0.26%	0.24%	0.24%
		Master's	20.67%	20.71%	21.00%
		University	50.92%	53.09%	53.57%
		College	23.84%	20.99%	20.38%
Others		4.30%	4.97%	4.81%	

Environmental Protection Expenditure

Loss or penalty due to environmental pollution in the past two years up to date of publication: None

Countermeasures:

The Company has taken into consideration any potential risks or violation of environmental regulations in formulating its environmental management system. TWM also closely monitors developments in the government's environmental policies or regulations to be able to design precautionary measures. The Company does not expect any expenditure arising from environmental pollution in the future.

The Company is committed to protecting the environment and has adopted various measures such as promoting "green" procurement, establishing energy-efficient base stations and IDCs, minimizing the use of paper in offices and stores, recycling waste cables, batteries and handsets, and encouraging users to switch to e-billing and online services. The

Company is the first to have won the awards of “R.O.C. Enterprises Environmental Protection Award” three years in a row and got the lifetime honor.

Employee Relations

Employee behavior/ethical standards

The Company has established policies and rules as a guide for employee conduct, rights, responsibilities, and ethical standards.

Delegation of authority

1. Authorization guidelines and limitations: Aimed at streamlining business processes, strengthening distribution of responsibility, as well as detailing management authority at each job level.
2. Empowerment and delegation rules: Designed to ensure smooth and normal business operations.
3. Job ranking, title and organizational structure policy: Formulated to correspond to employees’ career plans.

Working Rules

The Company’s working rules clearly define the rights and obligations of management and labor. The Company’s modern management approach has promoted cooperation among employees and benefited the Company.

Divisional responsibilities

The Company’s major divisions are separated by functions. Each division is tasked with specific job responsibilities and this separation of functions has strengthened the core competency of the Company.

Reward and punishment policies

The Company has drawn up a number of policies on rewards and punishments to encourage employees who have made special contributions to the Company, as well as discourage employees from behaving in a manner deemed damaging to the Company. These policies are stated in Article 14 and Articles 47 to 58 in the Company’s “Working Rules.”

Employee assessment policy

Supervisors provide feedback, assistance and map out individual development plans based on employee performance.

Attendance and leave policy

Enforcement of this policy – designed to serve as a guideline for employees – helps enhance work quality.

Business confidentiality policy

To maintain the Company’s competitiveness, employees are required to sign a “Confidentiality and Intellectual Property Rights Statement” and “Employment Contract” as a safeguard against potential damage arising from the disclosure of trade secrets. The Company provides employees with the required information and training courses to

strengthen their understanding of information security.

Sexual harassment prevention and handling procedures

The Company's "Working Rules" include rules on preventing sexual harassment in the workplace and promoting gender equality. The Company disseminates information on laws and procedures for filing complaints on sexual harassment on the intranet to serve as a guideline for employees.

Code of Conduct

The Company has a Code of Conduct that all directors, managers and employees are expected to adhere to and advocate in accordance with the highest ethical standards.

Employee benefits program

1. All employees are entitled to labor insurance, national health insurance, and group insurance coverage starting from the first day of work.
2. The Company has an employee stock subscription plan and an employee profit-sharing plan.
3. An Employee Welfare Committee was established in July 1998 to handle and implement employee benefits programs. In 2006, a Joint Employee Welfare Committee was set up to integrate the committees formerly set up by TAT, MBT (Mobitai), TFN and TFNM. The committee is in charge of a number of benefits designed to raise employees' quality of life and promote physical and mental well-being, including club activities, company outings, family day, and benefits for special occasions such as weddings, festivals and funerals. The Company appropriates around NT\$80mn to the welfare committee annually.

Employee training and education program

1. Training expense in 2012 and up to the publication date totaled NT\$13,279,395, with 50,319 in training hours and 16,762 participants.
2. Orientation for new employees includes introduction to the corporate culture, company organization, telecommunication market, IT and network systems, labor safety, as well as information security training.
3. Core competency development: Focus on basic competencies, including problem solving, decision-making, communication, project management, basic legal knowledge of the telecommunication market, team building and service skills.
4. Management training and development: Separate training programs for entry-level management, middle management and senior management. Training courses include performance management, leadership, motivation skills, strategy management, innovative thinking, team dynamics skills and organizational development skills.
5. The Company sends large numbers of employees to local and international telecommunication conferences,

management forums, consulting seminars, and vendor training programs every year. These activities have a profound impact on upgrading the Company's technologies, developing new products, introducing new and innovative ideas, and improving managerial skills.

6. The Company has a scholarship programs in place for its employees to develop their expertise in telecommunication technologies and business administration.
7. The Company sponsors external training courses for all employees annually. Employees can select courses that combine their personal interests and job needs to reap the maximum benefits from these training sessions.

Retirement plan and implementation

1. The Company has specific Employee Retirement Guidelines.
2. The Company has set up a Labor Pension Supervisory Committee, which was approved by the Taipei City Government in February 1998.
3. The Company implemented the New Labor Pension System in July 2005.
4. In accordance with No. 18 of the Financial Accounting Standards of the ROC, the Company retains the services of an actuary to assess and calculate the labor pension reserve and provide a detailed report.

Employee safety and sanitary policy

To fulfill the Company's social responsibility in providing its employees with a safe, healthy and comfortable working environment, the Company endeavors to:

1. Abide by and comply with regulations on environmental protection, safety and sanitation.
2. Be on constant lookout for potential hazards in the work environment to minimize accidents.
3. Promote health education, conduct physical examinations, and implement health management programs.
4. Promote and instill energy-saving consciousness to help reduce waste of resources.

The Company's employee safety and sanitary policy is posted on the intranet and is summarized as follows:

1. A unit dedicated to conducting environmental inspections and carrying out employee sanitary training courses was established in accordance with regulations.
2. A Health and Safety Committee was set up to draft a plan to prevent job injuries, ensure compliance and review related rules on employee health and sanitary improvement solutions through periodic meetings.
3. Full-time professional nursing personnel are employed to perform health checks, track the progress of staff who failed their health examinations, and hold talks on how to promote health. Staffers who are able to administer first aid treatment have been placed in each work area.
4. Fire/flood protection exercises are held periodically to reduce risks of employee injury and property loss from natural disasters.
5. Guards and security systems have been installed at all main base stations and work offices to protect staff, property and information security.
6. Energy-saving policies have been established to reduce carbon emissions.

Labor negotiations and protection of employee benefits

The Company, working under the management and labor as one concept and belief that a win-win situation can be achieved when the two sides work together, has followed relevant labor laws and regulations, held quarterly management/labor forums to facilitate communication, and promoted employee benefits to build a harmonious and satisfactory management/labor relationship.

Losses caused by labor disputes in the recent year: None, and expects none in the future.

Number of disabilities due to on-the-job injuries/fatalities in the recent year up to publication date

Year	2011	2012
Number of disabilities	2	2
Disabling Frequency Rate (FR, Note 1)	0.42	0.35
Disabling Severity Rate (SR, Note 2)	1.5	12.1

Note 1: The number of injuries resulting in fatalities and permanent total disabilities cases per million hours worked.

Note 2: The number of workday lost due to fatalities, permanent total disabilities per million hours worked.

Major Contracts

Nature	Counterpart	Contract period	Description	Restriction clauses
Sales and distribution	Synnex Technology International Corp	2005.02.01~2006.01.31 (Note 1)	Synnex is authorized to distribute TWM's mobile services.	Non-disclosure
	Aurora Telecom Corp	2012.07.01~2013.06.30	Aurora is authorized to distribute TWM's mobile services.	Non-disclosure
	Tsann Kuen Enterprise Co., Ltd.	2012.06.01~2013.05.31	Tsann Kuen is authorized to distribute TWM's mobile services.	Non-disclosure
	First International Computer, Inc. (FIC)	2011.07.01~2012.06.30	FIC is authorized to distribute TWM's mobile services.	Non-disclosure
Network interconnection	Chunghwa Telecom Co., Ltd.	2011.06.01~2012.05.31 (Note 2)	Network interconnection contract	Non-disclosure
	New Century InfoComm Tech Co., Ltd.	2005.05.01~2006.04.30 (Note 2)	Network interconnection contract	Non-disclosure
	Taiwan Fixed Network Co., Ltd.	2011.01.01~2011.12.31 (Note 1)	Network interconnection contract	Non-disclosure
	VIBO Telecom Inc.	2006.01.16~2007.01.15 (Note 3)	Voice and SMS interconnection contract	Non-disclosure
	Asia Pacific Telecom Co., Ltd.	2011.08.01~2012.07.31 (Note 2)	Network interconnection contract	Non-disclosure
	Far EasTone Telecommunications Co., Ltd.	2004.02.10~2005.02.09 (Note 1)	Voice and SMS interconnection contract	Non-disclosure
	First International Telecom Corp.	2005.05.01~2006.04.30 (Note 1)	Voice and SMS interconnection contract	Non-disclosure
	Global Mobile Corp.	2011.05.01~2012.04.30 (Note 1)	Network interconnection contract	Non-disclosure

Nature	Counterpart	Contract period	Description	Restriction clauses
Handset consignment sales	Synnex Technology International Corp.	2004.05.01~2005.04.30 (Note 1)	TWM accepts Synnex's consignment to sell handsets and related products.	Non-disclosure
Corporate bond offering	Chinatrust Securities and 9 other securities companies	2008.11.14~2013.11.14	The total issuing amount of the second unsecured straight corporate bond was NT\$8 billion. NT\$4 billion had been repaid on Nov. 14, 2012.	Non-disclosure
Corporate bond offering	KGI Securities Co., Ltd. and Grand Cathay Securities Corporation	2012.12.20~2019.12.20	The total issuing amount of the third unsecured straight corporate bond was NT\$9 billion.	Non-disclosure
Equipment purchase	Nokia Siemens Networks Taiwan Co., Ltd.	2011.02.01~2014.12.31	3G equipment supply contract amounts to NT\$6.65 billion. The maximum amount of total purchase increased to NT\$14.6 billion in September 2012.	Non-disclosure
Customer service	Taiwan Teleservices & Technologies Co., Ltd. (TT&T)	2006.01.01~2010.12.31 (Note 1)	TT&T accepts TWM's consignment to handle customer service and product sales.	Non-disclosure

Note 1: The contract will remain valid after it is expired if both parties do not issue any objection to the continuation of such contract.

Note 2: When any network interconnection contract expires, should the two parties not be able to conclude their negotiations within three months after their commencement, the process shall be as follows:

- (1) If the two parties concur to continue their negotiations, the terms and conditions of the current contract or such other conditions agreed by both parties will apply during the negotiation period.
- (2) Either party can appeal to the NCC for a ruling. Prior to the date of such a ruling, the terms and conditions of the current contract shall apply until the NCC makes a decision. The new contract will be made based on the NCC's ruling.

Note 3: Negotiations for the following year's contract shall commence three months prior to the contract expiry date. If negotiations are not finalized prior to the expiry date, the parties shall agree to perform their obligations based on the current contract until such time when negotiations are finalized.