

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	2014	2015	2016
Overall rating	3.7	3.7	3.8
Call quality	3.7	3.7	3.8
Customer hotline service	4.3	4.4	4.3
Store service	4.1	4.2	4.2
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

As of the end of 2016, the penetration rate for mobile subscribers had reached 123%, implying a saturated market. However, along with the fast-increasing adoption of 4G services, rapid innovations in mobile devices and rising demand for mobile internet and value-added services suggest a growing market, encouraging new entrants to venture into the market.

3. Competitive advantages

(1) Better customer mix

The Company has further improved its subscriber base structure, with 3G/4G subscribers accounting for 99% of the total as of January 2017.

(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 the nation's first 3.5G services. In 2014, 4G services were launched. By the end of 2016, the Company had a 3G/4G subscriber base of more than 7.35 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 the introduction of 4G services, lower prices for smart devices and data rate plans, and the emergence of new, varied applications, mobile internet access has rapidly spread 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 play a pivotal role in the supply chain.

Negative factors

- (1) The NCC's implementation of mobile termination rate (MTR) cuts from 2013 to 2016 is expected to weigh on mobile voice revenue.
- (2) The popularity of 4G unlimited data rate plans limits growth in mobile service revenue.

Countermeasures

- (1) 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 and adjust 4G pricing plans in response to changes in the market in order to boost overall mobile service revenue.

Enterprise Business Group

1. Main products and service areas

EBG mainly offers its products and services in Taiwan, but also provides international services in 243 countries. As of the end of 2016, the company's roaming services covered the following: GSM: 213 countries, 408 networks; GPRS: 186 countries, 358 networks; 3G: 157 countries, 301 networks; 4G: 59 countries, 98 networks.

2. Market status

Enterprise clients still need voice, data and internet services. Revenue from services related to mobility, cloud applications and ICT total solutions have potential to grow significantly.

- (1) Voice service: Fixed lines' talk minutes for local and international calls as well as unit price for fixed-to-mobile calls are expected to continue declining because of rising competition from VoIP and mobile services and the NCC's introduction of mobile termination rate cuts.
- (2) Data service: Given rising demand for enterprise data access, revenue from IP VPN and Metro Ethernet will remain the main contributor.
- (3) Internet service: As internet content services boom, enterprise demand for high-speed internet access has been rising. However, fierce competition will result in moderate revenue growth.
- (4) Mobile service: As the demand for office mobility increases, TWM is helping enterprise customers incorporate various mobile applications – including business workflow, sales automation, business intelligence, enterprise mobility management and mobility information security – into their mobile devices through high-speed 4G services. With enterprise users increasingly accessing internet information via their smart devices, mobile data revenue should benefit from the rising demand for mobile internet services.
- (5) Cloud service: Interest in cloud services has swept across industries, with more players investing in the

business in search of new hardware and software supply chain models. This bodes well for market expansion and increasing revenue from cloud services.

- (6) Enterprise integrated solutions: TWM has formed alliances with leading industry names, providing them with mobile applications, IoT, big data applications, security and smart industry solutions. These, along with telecom services, should boost revenues.

3. Competitive advantages

- (1) Premium brand equity: The Company provides customer-centric quality services. TWM Business Solution is readily associated with Taiwan Mobile and has won recognition among major enterprises.
- (2) Professional management team and efficient support group: Information security and backup frameworks are key considerations for enterprises adopting IP-based network. EBG fills this need, having won certifications from EuroCloud Star Audit (ECSA) and Cloud Security Alliance (CSA). Its cloud IDC is also the first and only data center in Taiwan to have been awarded Tier III certifications for design, construction and operational sustainability.
- (3) Tailor-made integrated services: The Company provides one-stop shopping and tailor-made services to enterprise customers to meet their various industry needs.
- (4) 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.
- (5) 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

- (1) 4G foundation and cloud (IaaS) services: Market demand for mobility and cloud services will drive revenue growth.
- (2) Fixed broadband products: Enterprises will need even-larger bandwidths to transport data.
- (3) EBG has long cultivated the enterprise market and knows what companies need. It has teamed up with enterprises to help them integrate their fixed-line, mobile, information system and cloud services.

Negative factors

- (1) 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.
- (2) Industrial and geographical boundaries have become increasingly blurred because of digital convergence. Domestic telecom operators face tough challenges from transnational large-scale content and cloud service companies.

Countermeasures

Confronted by changes in communication technology, multi-platform cloud services and mobility trends, as well as falling telecom service tariffs, enterprise clients are looking for telcos that can provide them not only basic telecom services, but also serve as a partner in exploring mobile, IoT and big data solutions. EBG will continue to promote and develop diversified services and applications to create more value and improve customer loyalty.

Home Business Group

1. Main products and service areas

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

2. Market status

(1) Cable TV

Taiwan's cable TV penetration rate has reached over 60% of households, according to NCC data. Watching TV is a major leisure activity in Taiwan – 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 National Communications Commission setting a target of 100% digital TV penetration rate by the end of 2017, business opportunities abound in this market of 8 million households nationwide. TWM Broadband is tapping into this digitalization value chain by offering rich HD content, stable and quality signals, various platforms for viewing TV programs and an affordable TV set promo package to boost digital TV's penetration rate.

(3) Broadband internet access

With the broadband internet access market moving toward higher-speed services, the migration of mid-to-low speed users to faster speeds will be the main growth driver for the market. TWM Broadband expects to expand its market share by offering competitive prices, around-the-clock customer service and superior quality for its 300Mbps internet access services.

3. Competitive advantages

(1) Optimize broadband network quality

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 enhance TWM's competitiveness in the broadband access market and facilitate digital convergence.

(2) Strengthen 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 up to 300Mbps high-speed internet access services. Unlike ADSL with its range constraints, cable internet provides lower cost, but premium quality, super high-speed broadband services. To cope with the rising number of customers, the Company will deploy more and denser fiber nodes to provide them with higher-speed and more stable broadband services.

(3) Enrich digital content and VAS to increase digital TV service ARPU

TWM Broadband aims to increase the variety and quantity of value-added services, such as HomeSecurity, personal video recorder (PVR), HomePlay and SuperMOD, to offer bundled services (i.e., broadband access, digital TV and VAS) to increase its subscriber base and ARPU.

(4) Leverage Taiwan Mobile Group's integrated resources to develop innovative digital convergence products and services

The Company's resources cover mobile communication, fixed network, CATV, ISP and channel content. The integration of these resources, together with 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 home market.

4. Opportunities and challenges

Positive factors

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

Riding on the government's digitization policy push and the launch of its SuperMOD, HomePlay and HomeSecurity services, 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

Consumer demand for downloading, uploading and sharing high-definition videos are increasing and 120Mbps high-speed cable internet service has become the mainstream. TWM Broadband has finished upgrading its ring-type fiber-optic backbone network and infrastructure in its operating areas and adopted the latest high-speed DOCSIS 3.0 cable internet technology. It can provide high-speed broadband internet access speeds of 300Mbps to help expand its market share, as well as increase customer 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 CATV operators.

(3) The NCC made it mandatory that CATV operators should provide customers with at least two free set-top

boxes, increasing operating costs.

- (4) The NCC has introduced CATV service area rezoning and competition has intensified as new entrants engage in price-cutting competition to win market share.

Countermeasures

- (1) TWM Broadband has been able to utilize its extensive resources (e.g., technology, marketing, sales and distribution) to promote high-speed internet access services and market digital convergence services with Taiwan Mobile Group's telecommunication, information and media content services. TWM Broadband aims to provide a "one-stop shopping" service that meets all of its customers' needs in order to boost its cable TV, high-speed broadband internet access and high-definition 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 help 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 "community-based growth and giving back to the 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 countermeasures to deal with changes in the market.
- (5) TWM Broadband is expected to roll out the latest high-speed DOCSIS 3.1 cable internet technology and infrastructure to deliver speeds up to 1Gbps high-speed service to customers. In addition, SuperMOD is built as a multi-tenant platform for the future cooperation with other OTT operators. The strategy will attract more partners to take part in SuperMOD and expand the scale of the OTT business.

Retail Business

1. Main products and service areas

momo mainly provides e-commerce and TV home shopping services in Taiwan, mainland China and Thailand.

2. Market status

New types of marketing platforms, such as shopping via mobile devices, are also growing alongside rising 4G adoption. Mobile platforms attract younger groups and could lead them back to cable or digital TV channels, allowing these sales channels to continue growing.

3. Competitive advantages

- (1) A solid reputation: Backed by years of experience, momo has built a solid reputation with suppliers and customers in the TV home shopping industry. Besides winning customers' confidence, momo has enhanced suppliers' willingness to entrust their brands to the Company, allowing it to offer a diverse range of products.
- (2) Strong support: momo is able to leverage the resources of affiliates – including TWM's mobile, fixed-line and cable TV businesses – to set up digital convergence, mobile platforms and mobile payment mechanisms.
- (3) Expanding economies of scale: momo's B2C e-commerce business is now a top two in the industry. This has given momo even stronger negotiating power with suppliers and made it more attractive to first-tier merchants, allowing it to increase its product offerings with higher quality.

4. Opportunities and challenges

Positive factors

- (1) A rising mobile device penetration rate should foster rapid growth in the mobile shopping market.
- (2) E-commerce should continue to benefit from the government's intent to accelerate the rollout of fiber-optic and 4G wireless broadband networks.
- (3) A low birthrate and an aging population are creating a new social trend that is worth tapping into.

Negative factors

- (1) Some products featured on home shopping networks have been fined for deceptive and exaggerated advertising claims.
- (2) Substitution from competing channels/platforms and intensifying market competition.
- (3) High product homogeneity and cutthroat pricing competition lead to lower product gross margins.
- (4) Food safety risks.

Countermeasures

- (1) Having started in TV home shopping, momo has an extensive system of suppliers and a professional product development team. This facilitated its expansion into online shopping, as it already has a trove of best-selling products to tap into, which not only prolonged their product life cycle, but also increased sales volumes and create differentiating factor versus the competition.
- (2) momo launched an online shopping mobile app to tap into the mobile market and increase customer stickiness. By promoting group buying and limited time promotions, momo is able to reach more consumers and stimulate buying willingness. The mobile platform also offers a more convenient shopping platform, encouraging consumers to increase the frequency of their purchases.
- (3) momo has a quality control team that visits factories to ensure that suppliers meet manufacturing safety standards. It also outsources product testing and examinations to ensure that products' raw materials , ingredients as well as labels, are in compliance with food safety standards.

- (4) momo will continue to further strengthen new sales platforms, such as mobile apps, shopping via remote control and digital TV interactive shopping, to meet the potential changes in the buying behavior of the consumers.
- (5) momo has enforced measures to filter out controversial or risky products and clearly define obligations between supplier and the company if and when fined.

Main features and production process of major products: The Company provides wireless/fixed-line telecom services, analog TV/digital TV subscription, cable broadband, e-commerce/TV home shopping and integrated information/communication services.

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

Major suppliers and customers in the past two years

- A supplier/customer that accounts for at least 10% of consolidated procurement/revenue

Major suppliers

Unit: NT\$'000

	2015				2016			
	Company	Procurement amount	% of consolidated procurement	Nature of relationship	Company	Procurement amount	% of consolidated procurement	Nature of relationship
1	Company A	11,575,751	20	Third party	Company A	7,630,557	13	Third party
2					Company B	6,096,355	11	Third party
	Others	47,356,081	80		Others	43,184,204	76	
	Total	58,931,832	100		Total	56,911,116	100	

Major customers: Not applicable as the Company's revenue from a single customer does not exceed 10% of its total operating revenue.

Reasons for variation

Procurements from suppliers varied as the Company purchased handsets and other 3C – computer, communication and consumer electronics – products from different vendors to meet its business development needs and market demand.

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

Revenue and sales volume in the past two years

Services		2015		2016	
		Sales volume	Revenue (NT\$'000)	Sales volume	Revenue (NT\$'000)
Mobile	Mobile services ('000 subs by year end)	7,453	51,811,095	7,439	51,549,981
Domestic fixed line	Local network ('000 minutes) ¹	351,611	580,204	332,634	558,769
	Domestic long distance ('000 minutes) ¹	130,795	103,569	120,851	91,583
International fixed line	International network ('000 minutes) ¹	428,177	3,229,646	306,650	2,500,771
Data service ('000 lines)		240	2,118,267	297	2,148,864

Note 1: Outgoing minutes only.

Note 2: Including retail sales of handsets, accessories, information products, 3C home appliances, daily necessities and cosmetics.