

## Risk Management

### Impact of inflation, interest and exchange rate fluctuations, and preventive measures:

#### 1. Impact of interest rate fluctuations

Interest rate fluctuations had a minimal impact on TWM's 2014 short-term bank borrowings, as interest rates remained low and stable. The Company signed a mid-term loan agreement with the banks to lock in mid-to-long-term interest rates and minimize impacts from interest rate fluctuations.

#### 2. Impact of exchange rate fluctuations

Only some of the Company's expenditures are denominated in euros and US dollars. To minimize the impact from foreign exchange rate fluctuations, the Company hedges risks through foreign exchange spot market transactions. Overall, exchange rate fluctuations had a minimal impact on the Company.

#### 3. Impact of inflation

Inflation had a minimal impact on the Company's operating performance in 2014 and up to publication date in 2015.

#### 4. Objectives and methods for hedge accounting of financial instruments (including derivatives) owned or used by the Company:

Not applicable as the financial instruments owned or used by the Company do not meet the criteria for hedge accounting.

### Investment policy and reasons for gains & losses for high-risk/high-leverage financial products, derivatives, loans to others and guarantees of debts:

1. The Company was not involved in any high-risk, high-leverage financial investment.
2. The Company passed the "Rules and Procedures on Lending and Making Endorsements/Guarantees" to supervise its financing and endorsement activities.
3. Derivatives transaction: None.

## Research and development plans

Project name	Objective	Status	Completion date	Key to success
4G LTE customer experience management	Collect customer experience records from network probes to support better customer service and network optimization.	Working on system design	June 2016	TWM already completed proof of concept (POC) for technical evaluation.
Special commission system with flexible architecture - Phase1	Develop an architecturally flexible special commission system with configurable data settings and system flow to quickly respond to changes in market dynamics and business strategies.	In progress	Dec. 2015	TWM has control over the core technology as it was developed in-house.

<b>Project name</b>	<b>Objective</b>	<b>Status</b>	<b>Completion date</b>	<b>Key to success</b>
Extension of TWM billing system to external merchants	Provide innovative payment services for external merchants by using TWM billing system, which supports various types of e-commerce transactions.	In progress	June 2015	TWM has control over the core technology as it was developed in-house.
TWM customer care mobile app	Apply new user experience design and support instant text messenger for customer service to improve customer satisfaction.	Working on system design and implementation	Sept. 2015	TWM has control over the core technology as it was developed in-house.
M+ Messages	Enhance enterprise IM (Instant Messaging) functions, develop tools for collaboration, and improve data security level.	Working on system design and implementation	Sept. 2015	TWM has control over the core technology as it was developed in-house.
TAMedia - Mobile advertisement platform	Support native advertising and optimize advertisement tracking technology to support cost per lead (CPL) model.	Working on system design	Sept. 2015	Technology is mature.
myVideo	Support download-to-rent (DTR) model to optimize user experience. Provide advertising insertion mechanism to enhance business model's flexibility	Working on system design	2Q15~4Q15	Technology is mature.
Mobile Payment	Provide a mobile wallet service based on NFC (Near Field Communication) and QR Code technologies. This wallet can function as a credit card, transport card, membership/reward card, bank account, and prepaid account. It also supports coupon and advertisement functions for merchants.	Working on system implementation	June 2015	Both the business model and technology are mature.
Value-added services for Voice over LTE (VoLTE)	Provide MRBT (Multimedia Ring Back Tone) and MVPN (Mobile Virtual Private Network) service for VoLTE customers.	Working on system design	Sept. 2015	TWM has control over the core technology as it was developed in-house.
Mobile game marketing platform	Build a market promotion platform for mobile games that supports game downloads, payment, game tips, reward points, virtual item redemption, customer reviews and social networking functions.	Working on system design	June 2015	Both the business model and technology are mature.

## **Regulatory changes and developments**

### **1. Revision of digital convergence regulations**

#### (1) Status

In response to the development of digital convergence services, the NCC plans to change the vertical regulatory framework of the telecommunications, cable TV, terrestrial TV and satellite TV industries into a horizontal hierarchical regulatory framework. The commission plans to amend/reclassify the Telecommunications Act, the Cable Radio and Television Act, the Radio and Television Act, and the Satellite Broadcasting Act into the following acts: Telecommunications Act, Platform Act (including CATV and fixed-line), Content Act (including terrestrial TV and satellite TV), and Convergence Act. The commission has been soliciting public opinions on digital convergence development since December 2013 and will submit a draft to the Legislative Yuan afterwards.

#### (2) Countermeasures

The Company is closely monitoring the progress of the amendments and continues to communicate with and forward suggestions and recommendations concerning related policies and regulations to the NCC to ensure a favorable regulatory environment for the industry's development.

### **2. TWM launched mobile broadband (4G) service**

#### (1) Status

Taiwan Mobile was awarded a 4G license for 15MHz x 2 on the 700MHz frequency band by the NCC on April 30, 2014, and launched its LTE service on June 4, 2014. TWM received two additional licenses for 5MHz x 2 each on the 1800MHz and 700MHz frequency bands on August 29, 2014 and March 20, 2015, respectively, from the NCC. TWM is the only operator that has the largest contiguous spectrum of 20MHz x 2 on the 700MHz band, allowing it to provide the fastest download/upload speed among its peers. In addition, with FET's early return of part of its 2G spectrum approved by the NCC on March 25, 2015, TWM will have another 5MHz x 2 spectrum (10MHz x 2 in total) on the 1800MHz frequency band for LTE use according to the Mobile Broadband Regulation.

#### (2) Countermeasures

Taiwan Mobile is actively increasing spectrum holdings for LTE use to provide high-speed mobile broadband services to its clients.

### **3. Rezoning of CATV service areas**

#### (1) Status

At press time, the NCC has awarded four operating licenses: one in New Taipei City and three in Greater Taichung. However, none have commenced operations because of authorization issues over content. The NCC has also approved 10 applications to start preparatory works for operations: four in Taipei, three in New Taipei City, one in Greater Taichung, one in Greater Kaohsiung and one in Changhua County. The commission is further reviewing one new application in Keelung City.

#### (2) Countermeasures

With the threat of new competition, the Company is integrating its mobile, fixed-line, CATV and digital content to provide users with more digital convergence services, accelerating digitization services and offering more HD channels to enhance customer loyalty.

### **4. Legislative Yuan reviewing ban on media investments by political interests**

#### (1) Status

In March 2012, the Executive Yuan submitted a draft amendment to the Cable Radio and Television Act that would allow a company in which the government indirectly holds less than 10% of its shares to invest in the media industry. The proposed threshold was lowered to 5% by the legislature's Transportation Committee. The amendment still has to be approved by the legislative plenary.

(2) Countermeasures

The relaxation on indirect government ownership should ease the restrictions preventing the Company from venturing into other CATV service areas, giving the Company more flexibility in managing its business. The Company is closely monitoring the progress of the proposed amendment and continues to communicate with and forward suggestions and recommendations concerning related policies and regulations to the Legislative Yuan.

## **5. NCC expects to implement “a la carte” pricing for basic channels starting in 2017**

(1) Status

The NCC plans to implement “a la carte” pricing for basic channels starting in 2017, but it has met with strong opposition from various parties. The NCC has asked new entrants to commit to such a plan when they launch their services in a bid to push its implementation.

(2) Countermeasures

The implementation of “a la carte” pricing for basic channels is expected to have a significant impact on the CATV industry. The Company is closely monitoring the progress of the policy and continues to communicate with the NCC, the Executive Yuan and lawmakers in hopes of maintaining the original cap on pay TV monthly fees and have more flexibility in bundling channels and rate plans.

## Technology changes and development

### 1. Long Term Evolution (LTE) and Long Term Evolution Advanced (LTE-A)

#### (1) Status

LTE, the next generation mobile broadband access technology after 3G, is the dominant global 4G standard for mobile broadband. As LTE can be used in different spectrum bands and is able to provide faster and more efficient mobile broadband access services than 3G, most mobile operators worldwide have built or plan to base their 4G services on LTE. LTE-A is a more advanced technology, with carrier aggregation (CA) being a major feature. CA technology can aggregate two non-contiguous LTE bands to provide a high throughput equivalent to that from two contiguous LTE bands.

#### (2) Countermeasures

TWM won two 15MHz x 2 blocks on the 700MHz (spectrum A4) and the 1800MHz (spectrum C1) bands during the auction in 2013, and has aggressively stepped up its network deployment. TWM started its LTE service through the 15MHz x 2 spectrum on the 700MHz band in June 2014 and then launched 4G services through the 5MHz x 2 spectrum on the 1800MHz band to support 4G smartphones that are not 700MHz LTE enabled. The spectrum utilized on the 700MHz band increased up to 20MHz x 2 to provide a theoretical download speed of 150Mbps starting March 2015. In some metropolitan areas, LTE-A service, which adopts CA technology to combine spectrum of 20MHz on the 700MHz band and 5MHz on the 1800 MHz band to enable a theoretical download speed of 180Mbps, has been provided since then. Going forward, TWM aims to continue expanding its 700MHz and 1800MHz 4G network coverage, utilize more spectrum on 1800MHz up to 10MHz x 2 and increase its LTE-A service regions with CA technology.

### 2. Rising popularity of internet protocol

#### (1) Status

The popularity of internet protocol (IP) has revolutionized the telecommunications business and network infrastructure, giving rise to increased IP-based communications traffic. IP-based telecom is able to simplify network infrastructure, which translates into big savings on operating costs. On the other hand, not only has the increasing availability of cheap or free VoIP services had a great impact on traditional fixed-line operators' long distance and international voice call revenue, free mobile IP messaging services, such as Line, even caused a decline in SMS traffic during the New Year holidays in 2012 to 2015.

#### (2) Countermeasures

TWM has built the latest IP-based optical core network and deployed IP core access and transmission technologies over the past few years. It is also conducting laboratory tests of IPv6 and various End-to-End IP network quality measurements, VoIP and IP messaging application services to lead industry development.

In 2014, the Company continued developing new IP application services and conducting research on the latest optical packet carrier ethernet technologies to introduce more services that provide households with the most advanced and innovative broadband services. Furthermore, the Company has started to test the new VoLTE technology to provide HD-level high-quality VoIP service to LTE subscribers in the future.

### 3. Digital convergence and cloud services

#### (1) Status

Because of the digitalization trend, the transmission and exchange of related digital content and services among different carriers, systems and platforms have brought about changes in the wired and wireless communications and broadcasting industries. This has not only promoted competition and integration of the industries, but also facilitated industry consolidation. Cloud computing technology and service – the base of digital convergence – have progressed from merely a concept to a profitable business, and should be a future trend.

#### (2) Countermeasures

Merging Taiwan Fixed Network (TFN) and Taiwan Telecommunication Network Services (TTN) in 2007 enhanced the Company's status as a leader in the digital convergence era. At the end of 2010, the Company launched its four-screen-and-a-cloud digital convergence service, integrating handset, PC, tablet and TV. In 2013, TWM completed the

construction of a green data center and launched its services. This data center received an ISO 27001 certification for information security management and an ISO 50001 certification for efficient energy management. The data center also adopted European Corporate Security Association (ECSA) certification process to enhance its information security protection mechanism and ensure safety and user satisfaction for cloud services. TWM plans to use this data center to provide infrastructure as a service (IAAS), enabling the Company to launch intelligent cloud services in four key areas – mobile life, digital content, intelligent life and intelligent enterprise.

#### **4. Popularity of mobile smart devices and WiFi technologies**

##### **(1) Status**

The popularity of the iPhone, Android phone and other mobile smart devices has dramatically boosted the growth of data usage. This has forced global mobile operators to expand their access networks' backhaul bandwidth and network capacity, which in turn has increased the pressure on their operating costs. Many mobile operators have started building WiFi networks to offload data traffic.

##### **(2) Countermeasures**

The Company continued deploying more WiFi hotspots in 2014. Statistics shows that the adoption rate and usage of WiFi service by mobile broadband customers have been increasing. Therefore, TWM will continue to expand its WiFi coverage to offload data traffic from the mobile network.

#### **Impact of changes in brand image on the Company's risk management policies in 2014 up to publication date in 2015:**

None. TWM has long built up a sound image among investors and customers for its continuing efforts to enhance corporate governance, network communication quality and customer service, as well as to fulfill its corporate social responsibility. These efforts won numerous recognitions and awards in 2014 (please refer to Chapter 1) and should aid the Company in preventing, controlling and managing latent risks that it may face and help it maintain its good corporate image.

**Expected benefits and risks from mergers in 2014 up to publication date in 2015:** None.

**Expected benefits and risks related to plant facility expansions in 2014 up to publication date in 2015:** Not applicable as the Company is not a manufacturer.

**Risks from supplier and buyer concentration in 2014 up to publication date in 2015:**

The Company has minimal risks from supplier and buyer concentrations (please refer to Chapter 4).

**Significant changes in shareholdings of directors and major shareholders in 2014 up to publication date in 2015:** None.

**Changes in management controls in 2014 up to publication date in 2015:** Not applicable.

**Significant lawsuits and non-litigious matters in 2014 up to publication date in 2015**

**1. The Company:** None.

**2. The Company's directors, general manager, executives, major shareholder holding more than 10 percent of the Company's shares:** None.

### 3. The Company's subsidiaries

#### (1) Taiwan Fixed Network Co., Ltd. (TFN)

The Construction Bureau of the Taichung City Government ruled that TFN should pay a construction and maintenance fee of NT\$18,688,057 for the reconstruction of the National Second Highway extension's interchange system – A-J bids for common duct construction for 2-1 Road in Fongyuan City.

**Parties Involved:** TFN is the defaulting party.

**Grounds for Lawsuit:**

The Construction Bureau ruled that TFN should pay a construction and maintenance fee of NT\$18,688,057 according to Article 21 of the Common Duct Act and Articles 2, 3 and 4 of the Regulations on Cost Allotment for Common Duct Construction and Management in March 2014. TFN disagreed with the above administrative disposition and filed an administrative appeal. The Taichung City Government revoked the original administrative disposition on June 20, 2014, and requested that the Construction Bureau issue an appropriate and eligible disposition within 90 days after receipt of such written decision from the Taichung City Government. The Construction Bureau has not yet issued any disposition.

#### (2) TCC Investment Co., Ltd. (TCCI)

TCCI filed two lawsuits against Taiwan High Speed Rail Corp (THSRC) for (i) the payment of preferred share dividends in 2007 and 2008, and (ii) the buy-back of the preferred shares.

**Parties Involved:** TCCI is the plaintiff and THSRC is the defendant.

**Amount Claimed:** NT\$24,726,027 for the dividends in 2007, NT\$25,000,000 for the dividends in 2008 and NT\$500,000,000 for the buyback of the preferred shares.

**Grounds for Lawsuit:**

On January 27, 2003, TCCI purchased 50,000,000 Class A name-bearing convertible preferred shares issued by THSRC at NT\$10 per share. According to Article 7-1 and Article 36, paragraph 3 of THSRC's Articles of Corporation, and Articles 8 and 18 of the Regulations for the Issuance and Conversion of Class A Name-Bearing Convertible Preferred Shares ("Regulations"), preferred stock dividends are set at 5% of par value per annum. Dividends are payable in cash on a yearly basis. The issue of preferred shares had been due on February 26, 2010, and TCCI was entitled to request THSRC to buy back the preferred shares in accordance with the above Regulations. However, THSRC has failed to pay any dividend since January 5, 2007. To protect its interests, TCCI filed a lawsuit against THSRC to claim its preferred stock dividends (NT\$24,726,027 for 2007 and NT\$25,000,000 for 2008) plus late payment interest, and filed another lawsuit against THSRC to buy back the preferred shares.

**Status:**

Lawsuit for 2007 dividends, filed on June 24, 2013: The Shihlin District Court and Taiwan High Court dismissed TCCI's claim. TCCI filed an appeal on December 12, 2014, which is now pending in the Supreme Court.

Lawsuit for 2008 dividends, filed on September 23, 2013: The Shihlin District Court dismissed TCCI's claim, and TCCI filed an appeal on November 27, 2014, which is now pending in the Taiwan High Court.

Lawsuit for buyback of preferred shares, filed on January 16, 2015: The case is pending in the Shihlin District Court.

#### (3) Taiwan Kuro Times Co., Ltd. ("Taiwan Kuro")

The Taiwan Intellectual Property Office ("TIPO") issued an administrative disposition in response to Taiwan Kuro's appeal for a review of the generalized licensing royalty rates announced by the Music Copyright Society of Chinese Taipei ("MUST"). Taiwan Kuro disagreed with TIPO's disposition and filed an administrative appeal. When the Ministry of

Economic Affairs dismissed the appeal, Taiwan Kuro filed an administrative litigation. The Intellectual Property Court dismissed Taiwan Kuro's claim, and Taiwan Kuro appealed to the Supreme Administrative Court.

**Parties Involved:** Taiwan Kuro is the appellant and TIPO is the appellee.

**Date of Filing:** The lawsuit was filed on April 25, 2014.

**Grounds for Lawsuit:**

On December 19, 2012, TIPO issued an administrative disposition in response to an appeal filed by Taiwan Kuro on September 1, 2010, for a review of the generalized licensing royalty rates announced by MUST on August 12, 2010. TIPO stated that pursuant to Article 25, Paragraph 6 of the Copyright Collective Management Organization Act: "When there is sufficient reason for an application for review under Paragraph 1, the specialized agency in charge of copyright matters shall make a determination of the given royalty rate, which shall be effective from the date of application for review, provided that in the case of applications made prior to the date of implementation of a given royalty rate, the newly determined rate shall take effect from the date of implementation." Taiwan Kuro disagreed with the generalized licensing royalty rates stipulated in TIPO's disposition and filed an administrative appeal. The Ministry of Economic Affairs dismissed the appeal issued by Taiwan Kuro on June 25, 2013. Taiwan Kuro filed an administrative litigation to revoke TIPO's disposition on August 23, 2013. The Intellectual Property Court dismissed Taiwan Kuro's claim on March 26, 2014. Taiwan Kuro disagreed with the judgment and appealed to the Supreme Administrative Court on April 25, 2014.

**Status:** The case is pending in the Supreme Administrative Court.

## **Other major risks**

### **Customer fraud management policy**

#### **1. Verification before activation**

Applicants' identity and qualifications are carefully reviewed and verified before service is activated.

#### **2. Monitoring after activation**

- (1) Exception management: Relatively "high-risk" applicants are filtered out by the system to protect users' interests.
- (2) Credit control: The system analyzes customers' behavior patterns to strengthen client management.

**Other significant items:** None.