# **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 2015 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 2015 up to publication date in 2016.

# 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	Completion date
4G LTE customer experience management	Collect customer experience records from network probes to support better customer service, network optimization and user behavior analyses.	Dec. 2016
Call center PBX system – SS7 equipment upgrade	In line with the government policy to terminate 2G services, upgrade call center PBX and phase in voice gateway products and technology to build an IP-based service platform.	Dec. 2016
M+ Messages	Enhance enterprise IM (instant messaging) functions and optimize user interface to improve efficiency.	June 2016
TAMedia - Mobile advertisement platform	Design new categories of interactive ads.	Sept. 2016
myVideo	Develop new user interface and experience. Provide more solutions for big screen and interactive video.	Sept. 2016
Mobile payment	Enhance mobile wallet to support more e-ticket functions, transport card and a variety of coupons/promotions.	Sept. 2016
Value-added services for Voice-over LTE (VoLTE)	Provide MRBT (Multimedia Ring Back Tone) service for VoLTE customers.	June 2016
myBook	Remodel mobile app to enhance user experience and support interactive multimedia e-books (ePub3.0 standard).	Dec. 2016

# Regulatory changes and developments

### 1. Revision of digital convergence regulations

#### (1) Status

In response to the development of digital convergence services, the NCC is planning to amend and reclassify major laws governing the telecommunications, terrestrial TV, cable TV and satellite TV industries into the following acts: the Telecommunication Enterprises Act, the Communication Infrastructure and Resource Administration Act, the Cable Multi-channel Platform Services Administration Act, the Radio and Television Enterprises and Channel Enterprises Administration Act, and the Electronic Communication Administration Act. The commission has been soliciting public opinions on digital convergence development since October 2015 and submitted a draft to the Executive Yuan on December 31, 2015. After soliciting public opinions online through the vTaiwan website and internal discussion, The Executive Yuan plans to submit the bill draft to the Legislative Yuan in May 2016.

#### (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 and the Executive Yuan to ensure a favorable regulatory environment for the industry's development.

#### 2. NCC's auction of 2500MHz and 2600MHz bands

#### (1) Status

TWM participated in the NCC's first auction of the 2500MHz and 2600MHz bands on November 17, 2015. However, TWM decided to exit the auction when bidding prices appeared to exceed fair market value. Given that the Company has ample spectrum resources in hand to meet future demand and the government is planning to release more spectrums in 2017, TWN does not foresee risks from network constraints in the next three to five years.

#### (2) Countermeasures

TWM will continue to pursue network optimization to offer premium services and focus on participating in the NCC's spectrum auction in 2017 to provide customers with high-speed broadband services.

# 3. Legislative ban on media investments by political interest groups

#### (1) Status

The amendments to the Cable Radio and Television Act were passed and went into effect on January 8, 2016. However, the ban on investments in media outlets by political parties and the government remains. To give cable TV system operators more flexibility prior to a potential easing of the ban, the Legislative Yuan agreed to extend the term of the cable licenses from nine years to 12 years for the operators whose licenses were still valid prior to the date when the amendments took effect. System operators have to apply for licenses for local channels and shopping channels in accordance with the aforementioned amendments.

#### (2) Countermeasures

The relaxation of indirect government ownership in media outlets would have eased the restrictions preventing the Company from venturing into other cable TV service areas and given the Company more flexibility in expanding its business. The Company will continue to communicate with lawmakers and seek passage of the amendments.

# 4. NCC plans to introduce "a la carte" pricing for basic channels in 2017

# (1) Status

The NCC plans to start implementing "a la carte" pricing for basic channels in 2017, but it has met with strong resistance from various parties. On December 4, 2015, the Legislative Yuan agreed in the principle to the plan and asked the NCC to submit a proposal for approval in six months. The NCC finished drafting a proposal in March 2016 and started holding public hearings on the plan in April.

#### (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 and the Legislative Yuan in hopes of maintaining basic channels' quality and quantity 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 is the dominant global 4G standard for mobile broadband. It supports both paired spectrum for frequency division duplex (FDD) and unpaired spectrum for time division duplex (TDD). LTE-A is a more advanced technology, with carrier aggregation (CA) being a major feature. CA technology can aggregate two or more non-contiguous LTE bands to provide a high throughput equivalent to that from contiguous LTE bands. In November 2015, the NCC held its first auction of the 2500MHz and 2600MHz frequency bands. TWM exited the auction when bidding prices appeared to exceed their fair market value.

#### (2) Countermeasures

TWM won two 15MHz x 2 blocks in the 700MHz (spectrum A4) and the 1800MHz (spectrum C1) bands during the auction in 2013, and has aggressively stepped up its network deployment:

- a. Started offering LTE services by deploying the 15MHz x 2 spectrum in the 700MHz band in June 2014.
- b. Provided 4G services through the 5MHz x 2 spectrum in the 1800MHz band and offered CA service by aggregating the 15MHz x 2 spectrum in the 700MHz band and the 5MHz x 2 spectrum in the 1800MHz band.
- c. Increased spectrum deployment in the 700MHz band up to 20MHz x 2 with total spectrum for CA service reaching 25MHz x 2.
- d. Increased spectrum deployment in the 1800MHz band up to 10MHz x 2 with total spectrum for CA service reaching 30MHz x 2.

As TWM has ample spectrum resources to meet market demand, it can afford to bide its time and join the next NCC spectrum auction in 2017. For now, the Company will continue to focus on providing high-speed 4G services with the widest network coverage to maintain its competitive edge.

# 2. Rising popularity of internet protocol

### (1) Status

Software-defined networking (SDN) is a next-generation network architecture that separates the control layer and data transfer layer to optimize performance and simplify network configuration and deployment. Another important new technology is network function virtualization (NFV), which uses virtualization technology to separate network functions from proprietary hardware. NFV reduces the complexity of the integration and deployment of large numbers of specialized and proprietary hardware devices. The industry transformation by NFV and SDN will not only impact network computing platforms and network architecture, but also enable the rapid deployment of network infrastructure supporting smart cities, homes, cars, enterprises, and the Internet of Things (IoT).

# (2) Countermeasures

TWM is actively evaluating, trialing and deploying SDN and NFV technology to enhance network performance and rapidly provide users innovative services with the most advanced network. To meet the IoT trend, the Company has accelerated cross-industry cooperation. In May 2015, it teamed up with Advantech, taking the first step in the development of the "Industrial Internet" in Taiwan. By combining TWM's laaS "cloud computing" and Advantech's

"WebAccess," enterprises can introduce "Industrial Internet" rapidly, and significantly enhance their competitive advantage.

#### 3. Digital convergence and cloud services

#### (1) Status

Next generation network (NGN) utilizes a converged all-IP network to transport voice, data, image and video, and support a wide variety of devices. Meanwhile, cloud services break the traditional boundaries between industries, triggering cross-industry competition.

#### (2) Countermeasures

At the end of 2010, TWM launched its four-screen-and-a-cloud digital convergence service, integrating handsets, PCs, tablets and TVs. In 2014, TWM launched a world-class green and energy-efficient cloud internet data center (IDC). In the same year, the Company's laaS received a European Corporate Security Association (ECSA) certification. In 2015, its laaS was also certified by the Cloud Security Alliance (CSA), while its cloud data center received an Uptime Institute Tier III Certification of Operational Sustainability (TCOS). TWM's strategy is to continuously enhance the information security, service quality and functions of its cloud services, and complementing them with world-class cloud IDC infrastructure.

# Impact of changes in brand image on the Company's risk management policies in 2015 up to publication date in 2016:

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 2015 (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 2015 up to publication date in 2016: None.

Expected benefits and risks related to plant facility expansions in 2015 up to publication date in 2016: Not applicable as the Company is not a manufacturer.

Risks from supplier and buyer concentration in 2015 up to publication date in 2016:

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 2015 up to publication date in 2016: None.

Changes in management controls in 2015 up to publication date in 2016: Not applicable.

# Significant lawsuits and non-litigious matters in 2015 up to publication date in 2016

#### 1. The Company:

(1) Spectrum dispute between Far EasTone Telecommunications Co., Ltd. ("FET") and the Company

**Parties Involved:** FET is the plaintiff and the Company is the defendant.

**Grounds for Lawsuit:** 

FET filed a lawsuit claiming that: a) TWM should not use the C1 spectrum block until it has returned the C4 spectrum block to the NCC; and, b) TWM should file an immediate application to return the C4 spectrum block to the NCC and pay FET NT\$1,005,800,000.

Status: The case is pending in the Taipei District Court.

#### (2) Provisional injunction filed over spectrum dispute between FET and the Company

Parties Involved: FET is the applicant and the Company is the counterparty.

**Grounds for Lawsuit:** FET filed a provisional injunction in May 2015 to prohibit the Company's use of the C1 spectrum block.

**Status:** On July 1, 2015, the Taipei District Court ruled that FET shall provide a collateral of NT\$1,048,703,000 or the same amount of negotiable certificates of deposit (NCDs) issued by the Bank of Taiwan in order to restrict the Company from using the C1 spectrum block from July 1, 2015 to June 30, 2017, before the Company returns the C4 spectrum block and receives the NCC's green light to use the C1 spectrum block. The Company can provide a counter-security of NT\$927,000,000 or the same amount of NCDs issued by the Bank of Taiwan to lift or nullify this injunction. The Company provided the counter-security on July 14, 2015 to continue using the C1 spectrum. The Company also filed a counterappeal against the above ruling. The Taiwan High Court rejected the Company's counterappeal in a final ruling in September 2015.

# 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 a disposition.

**Status:** TFN received a payment of NT\$18,707,544 (including the disputed amount of NT\$18,688,057 and NT\$19,487 that TFN overpaid) from the Construction Bureau on May 26, 2015.

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

TCCI filed three lawsuits against Taiwan High Speed Rail Corp (THSRC): (i) the payment of preferred share dividends in 2007; (ii) the payment of preferred share dividends in 2008; and (iii) the buyback 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 Lawsuits:**

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 two lawsuits 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:

Lawsuits for 2007 and 2008 dividends: TCCI filed lawsuits on June 24, 2013 (for dividends in 2007) and September 23, 2013 (for dividends in 2008). Both the Shihlin District Court and the Taiwan High Court dismissed TCCI's lawsuits. TCCI filed appeals on December 12, 2014 (for dividends in 2007) and June 25, 2015 (for dividends in 2008) with the Supreme Court. On December 20, 2015, TCCI and THSRC signed an agreement that TCCI would drop the lawsuits seeking dividend payments for 2007 and 2008. TCCI received the cumulative dividend payments of NT\$214,657,534 from THSRC on January 20, 2016.

Lawsuit for buyback of preferred shares: TCCI filed a lawsuit on January 16, 2015, and the Shihlin District Court ruled in favor of TCCI on May 27, 2015. THSRC filed an appeal with the Taiwan High Court. On August 7, 2015, THSRC voluntarily bought back TCCI's preferred shares valued at NT\$500,000,000. On December 20, 2015, TCCI and THSRC signed the above agreement and TCCI dropped its lawsuit.

## (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. The Supreme Administrative Court reversed the original judgment and remanded the case to Intellectual Property Court.

Parties Involved: Taiwan Kuro is the plaintiff and TIPO is the defendant.

#### **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 ruling and appealed to the Supreme Administrative Court on April 25, 2014. The Supreme Administrative Court reversed the original ruling and remanded the case to the Intellectual Property Court on August 17, 2015.

Status: The case is pending in the Intellectual Property 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' behavioral patterns to strengthen client management.

Other significant items: None.