

## **Analysis of Major Capex and its Impact on Finance and Operations**

The Company funds its major capex with internally generated cash flows.

## **Investment Policies, Reasons for Profit/Loss, Plans for Improvement, and Future Investment Plan**

Taiwan Mobile focuses on making long-term and strategic investments. The objective is to strengthen and diversify its core business activities and expand into new fields to create synergies.

In 2020, on a consolidated basis, TWM's investment income from long-term investments under the equity method amounted to NT\$99,891 thousand as the operations of said investments stabilized. For future investments, TWM will continue to make decisions based on prudent strategic assessments.

## **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 2020 short-term bank borrowings, as interest rates remained low and stable. The Company has mid-term loan facilities with banks and mid-to-long-term straight bond issuances 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 payments 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 an insignificant impact on the Company.

3. Impact of inflation

Inflation had a minor impact on the Company's operating performance in 2020 up to the publication date in 2021.

### **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 Endorsement/Guarantees to supervise its financing and endorsement activities. As the counterparties in its loans and guarantees are all its subsidiaries, there is minimal operating risk.

3. Derivatives transaction: None.

## Future research and development plans

Project name	Objective
House of Gamers	Establish a social network for mobile game players to compete, communicate and interact to boost player enthusiasm and stickiness in order to extend the life cycle of a mobile game.
Digital sales stores	Develop a mobile app to support merchandise inventory management and information inquiry in order to increase the operational efficiency of direct store agents.
M+	Improve cross-office collaboration and integrate Cloud PBX to enrich voice communication so as to expand our enterprise customer base.
myVideo	Provide new types of content, such as multiple-screen live streaming and multiple-plot videos. Integrate video service with smart speaker, develop 5G video applications, and provide more AR/VR services.
Smarter Home	Provide services to enable hands-free calling using Google Nest speaker. Integrate more diversified home appliances and devices into our Smarter Home ecosystem.
MyMusic	Build an end-to-end Podcast platform and develop music-related live streaming app.
momo's intelligent customer service platform upgrade	Upgrade platform with the addition of an intelligent customer service system to improve service quality and timeliness of response, deal with customers' problems efficiently, reduce manpower and increase customer satisfaction.

## Expected research and development expenses

The projected research and development expense for 2021 is NT\$253,193 thousand.

## Regulatory changes and developments

### 1. The National Communications Commission (NCC) on Sept. 9, 2020, approved the transition of Taiwan Mobile (the Company) and Taiwan Fixed Network to the Telecommunications Management Act

#### (1) Status

The company may apply the new laws and regulations, which are conducive to the effective use of resources, such as frequency sharing, network leasing or combination, and need not apply to the NCC for tariff adjustments and promotions.

#### (2) Countermeasures

The Company will integrate network and frequency resources in accordance with the intent of the law to provide users with better service quality.

### 2. The Executive Yuan to establish ministry of digital development in 2021-2022

#### (1) Status

In order to promote the six core strategic industries, President Tsai Ing-wen announced during her inauguration on May 20 plans to establish a ministry of digital development. The ministry would supervise and draft policies relating to information, cybersecurity, telecommunications, internet and communication. The Executive Yuan is working on the ministry's organizational structure and functions, some of which are currently spread across several government agencies, including the NCC, the National Development Council, the Department of Posts and Telecommunications, the Technology Division of the Ministry of Economic Affairs, the Electricity Resources Group of the Industrial Bureau, and the Information Security Division of the Executive Yuan.

#### (2) Countermeasures

The Company will pay close attention to the progress of the organizational changes.

**3. The NCC amended the “Standards for the Usage Fees of Radio Frequency” on August 25, 2020**

(1) Status

The NCC has amended the usage fees of radio frequency per MHz, the annual adjustment factor and the coverage factor, as well as added a discount fee for participating in vertical application services to reduce the cost of frequency usage fees for operators.

(2) Countermeasures

The Company will invest in network construction and optimizing network coverage in remote areas, as well as cooperate with other industries to develop innovative vertical applications to maximize economic benefits.

**4. The NCC announced the draft “Internet Audiovisual Service Management Act” on July 22, 2020**

(1) Status

The proposed bill to regulate over-the-top services stipulates a voluntary registration mechanism. However, it would also authorize NCC to require OTT operators to register after assessing factors such as the number of users, turnover, click flow, internet traffic volume, market influence, and other matters that significantly affect public interests. To prevent China-based OTT operators from illegally providing such services, either by themselves or through an agent, without obtaining permission in accordance with the Act Governing Relations between the People of the Taiwan Area and the Mainland Area, the bill stipulates that telecom operators and related internet service providers should not provide equipment or service to such OTT operators. Violators would be fined.

(2) Countermeasures

The Company is closely monitoring the progress of the proposed bill and continues to communicate with the NCC in hopes of maintaining a regulatory environment conducive to the industry's development.

**5. The NCC on April 1, 2020 approved Chunghwa Telecom’s plan to reduce wholesale IP peering price**

(1) Status

Using the average price in the Asia-Pacific region as a reference, the NCC approved Chunghwa Telecom’s new wholesale pricing scheme, which lowered the private peering price of IP network interconnections by 10.84%, from NT\$83 per Mbps to NT\$74 per Mbps. This scheme took effect retroactively on April 1, 2020.

(2) Countermeasures

The Company offers various digital economy services to satisfy clients’ needs.

**6. The NCC on December 14, 2020 announced the reduction of mobile termination rates**

(1) Status

To boost the mobile market’s competitiveness, the NCC has implemented a three-year (January 1, 2021 to June 30, 2023) scheme to lower the mobile termination rate, which is to be reduced by 22.4% over three years from NT\$0.571 per minute to NT\$0.443 per minute.

(2) Countermeasures

Voice demand for mobile services has been declining. The Company will continue to promote 5G and value-added services to improve user experience and increase profit.

## Technology changes and development

### 1. Mobile broadband access network

TWM aggressively deployed 4G/5G mobile broadband networks to respond to technology and industry changes:

- a) In response to the growth of mobile broadband demand, TWM launched 5G services on June 30, 2020, and by the end of 2020 covered more than 60% of the administrative districts in Taiwan with 4G/5G dual-connectivity service to improve network speed and capacity.
- b) TWM deployed and optimized the intelligent power-saving function of LTE base stations to extend its power-saving mode during low traffic periods to save energy.
- c) TWM will continue to invest in 5G New Radio (NR) technology to promote industrial development, meet consumer demand, save on operating costs and enhance shareholders' rights by providing more diverse applications and a brand-new smart life experience.

### 2. IDC and cloud related services

#### (1) Status

The Market Intelligence and Consulting Institute predicted that 2021 would be a transformative year for the telecom industry, as the COVID-19 pandemic, the US-China technology war and the commercialization of 5G around the world would spur dramatic changes in telecom products/technology, industry competition and business models. Products and technologies, such as 5G mobile phones, Wi-Fi 6 and OTT, would accelerate industrial upgrades. IoT, AI, cloud computing, edge computing and 5G would continue to play a key role in the tech industry's development. These technologies would interact with one another, such as the evolution of computing architectures driven by cloud and edge computing, fueled by the high bandwidth and low latency of 5G networks. Such technological evolutions would lead to growing demand for data centers, while security vulnerabilities would result in more stringent requirements for data centers. Organizations will have to adopt more policies and security measures relating to data center equipment, services, contractors, suppliers and staff. Climate change is also forcing a fresh review of resiliency planning.

#### (2) Countermeasures

TWM combined 5G and cloud computing to deepen its penetration into the hybrid cloud market. Leveraging its own 5G public network deployment and maintenance experience, TWM became a leader in 5G private network deployment. To satisfy the demand for tightened data center security, TWM's infrastructure as a service (IaaS) received ISO 27018 certification for personal information security. The Company also developed a resiliency plan to address the threat of climate change. Its data center received not only ISO 14001 certification for environmental management, but also the Green Grid Power Usage Effectiveness (PUE) silver certification for achieving a PUE of 1.5. Green electricity was also introduced to further reduce carbon emissions. As for data center services, TWM's strategy is to cooperate with world-class public cloud vendors and deliver a complete portfolio of public cloud services to enterprises. TWM is also developing AI solutions, enhancing information security, service quality and cloud services, and complementing them with a world-class cloud IDC infrastructure.

### Impact of changes in brand image on the Company's risk management policies in 2020 up to publication date in 2021:

The Company 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 2020 (please refer to Chapter 1) and should aid the Company in preventing, controlling and managing latent risks that it might face and help it maintain its good corporate image.

**Expected benefits and risks from mergers in 2020 up to publication date in 2021:**  
None.

**Expected benefits and risks related to plant facility expansions in 2020 up to publication date in 2021:**

Not applicable as the Company is not a manufacturer.

**Risks from supplier and buyer concentration in 2020 up to publication date in 2021:**

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

**Significant changes in shareholdings of directors and major shareholders in 2020 up to publication date in 2021:** None.

**Changes in management controls in 2020 up to publication date in 2021:** None.

**Significant lawsuits and non-litigious matters in 2020 up to publication date in 2021**

## 1. The Company:

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

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

**Grounds for Lawsuit:**

FET filed a lawsuit demanding that the Company: (a) file an immediate application to return the spectrum block 1748.7-1754.9/1843.7-1849.9 MHz (hereinafter referred to as "C4 spectrum block") to the National Communications Commission ("NCC"); (b) stop using the C4 spectrum block in any way, (c) stop using the spectrum block 1715.1-1721.3/1810.1-1816.3 MHz (hereinafter referred to as "C1 spectrum block") until it has returned the C4 spectrum block to the NCC, and (d) pay FET NT\$1,005,800,000.

**Status:**

In May 2016, the Taipei District Court ("District Court") ruled that: (i) the Company received an unfavorable judgment on the claims stated in sections (a) to (c); (ii) FET received an unfavorable judgment on the claim stated in section (d). The Company and FET filed their respective appeals with the Taiwan High Court ("High Court").

The High Court in January 2018 ruled as follows:

- (1) The District Court judgment in connection with the following items was dismissed:
  - (i) the unfavorable judgment against the Company on the claims stated in sections (a) to (c), and the corresponding portion that FET claimed provisional execution; and
  - (ii) the unfavorable judgement against FET on the claim stated in section (d), the corresponding portion of provisional execution, and litigation expenses.
- (2) For the dismissed portion stated in section 1(i), FET's claim and the motion of provisional execution in the first instance were rejected.
- (3) For the dismissed portion stated in section 1(ii), the Company shall pay FET NT\$765,779,233, as well as a 5% annual interest payment on NT\$152,583,658 of the above amount starting from September 5, 2015 to the payment date.

The Company appealed the High Court's ruling to the Supreme Court. In May 2019, the Supreme Court ruled that in regard to the portion of the High Court's original judgment (1) dismissing FET's other appeal, (2) ruling on the Company's payment obligation, and (3) ruling on litigation expenses with respect to the aforementioned two items, shall be dismissed and the case shall be remanded to the High Court.

The High Court in August 2020 ruled as follows:

- (1) The District Court judgment in connection with the following items were dismissed: the claim stated in the following section 2, the corresponding portion of provisional execution that FET claimed, and litigation expenses (except the part on final and binding judgment).
- (2) For the dismissed portion stated in the above section 1, TWM shall pay FET NT\$242,153,783, as well as a 5% p.a. interest payment on NT\$99,468,550 for the period starting from July 21, 2017 to the payment date.
- (3) The rest of the appeals was rejected.
- (4) FET shall bear 75 percent of the litigation expenses in the first and the second trials (except for the part on final and binding judgment), as well as the second and the third trials prior to the remand; TWM shall bear the rest.
- (5) Regarding the portion of TWM's payment as ruled, FET might file a provisional execution with a collateral of NT\$80,720,000; and TWM may provide a counter-security of NT\$242,153,783 to be exempt from the above provisional execution by FET.

The Company appealed the High Court's ruling to the Supreme Court. The lawsuit is pending in the Supreme Court.

**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:** None

**Other major risks and countermeasures**

In terms of information security and privacy protection, the telecommunications industry has a huge trove of personal data. If it is accidentally leaked, the Company could be held legally responsible and it could seriously damage the Company's reputation.

Countermeasures:

TWM has implemented the ISO/IEC 27001 – Information Security Management System (ISMS) and BS 10012 – Personal Information Management System (PIMS), certified by the SGS. The Company's Personal Information and Security Committee reviews the security and personal information protection policies on a quarterly basis and reports the results of ISMS and PIMS to the board of directors. The Company also purchased cybersecurity insurance for further and advanced customer data protection. To ensure a four-dimensional protection of users' personal data and internal confidential data, the Company has implemented the following:

1. External anti-hackers: build intrusion prevention, network segmentation, firewall, web firewall, etc.
2. Internal leakage prevention: handling data leakage protection detection and gap reinforcement measures.
3. System planning and development: incorporating system development security specifications and executing code weakness scanning, etc.
4. Operation and maintenance monitoring: establish an information security monitoring center, check and analyze system records, and report and track if abnormal conditions are found.

**Other significant items:** None