

Projected Consolidated Cash Flow in 2024

Unit: NT\$'000

Cash balance, beginning of the year (1)	Forecast net cash inflow from operations (2)	Forecast cash outflow from investment and financing activities (3)	Cash balance, end of the year (1) + (2) - (3)	Source of funding for negative cash balance	
				Cash inflow from investment activities	Cash inflow from financing activities
13,244,266	33,681,840	33,109,178	13,816,928	—	—

Source of Funding for Negative Cash Flow in 2024: Not applicable.

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 Plans

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

In 2023, on a consolidated basis, TWM posted losses of NT\$51.417 million from long-term investments under the equity method as most were early-stage investments. Going forward, TWM will continue to make prudent strategic investments.

Risk Management

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

- Impact of interest rate fluctuations
The Company has mid-term loan facilities with financial institutions and mid-to-long-term straight bond issuances on partial current outstanding liabilities to lock in mid-to-long-term interest rates and minimize risks from interest rate fluctuations. Overall, interest rate fluctuations had an insignificant impact on the Company.
- 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.
- Impact of inflation
Inflation had a minor impact on the Company's operating performance in 2023 up to the publication date in 2024.

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

- The Company was not involved in any high-risk, high-leverage financial investment.
- The Company passed the Rules and Procedures on Lending and Making Endorsements/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.
- Derivatives transaction: None.

Future research and development plans

Project name	Objective
Social engineering solution	Develop social engineering drills for enterprises to train employees through simulated exercises.
Anti-fraud service	Deploy AI deep learning to enhance phishing detection models and improve the Company's security intelligence database. The app offers advanced on-device protection, including communication security and Android app scanning capabilities.
AI 2.0	Develop a generative AI model toolkit to boost system efficiency.
Telecom wisdom maximization (TWMMax)	Deploy big data and AI models to offer intelligent personalized rate plans, products and/or services. TWMMax focuses on using deep learning for precision user demand predictions, ensuring customized experiences that meet customer preferences.
OPBiz	<ol style="list-style-type: none"> 1. Digitize application forms to help businesses set up new stores. 2. Continuously introduce convenient and practical SaaS solutions.
OP Pay BNPL (buy now pay later)	<ol style="list-style-type: none"> 1. Establish a QR Code offline payment system and a merchant backend website to expand collaborations with merchants and customer usage. 2. Introduce a partial refund feature for installment transactions and broaden the scope of regular checkout scenarios involving multiple options for online checkouts. 3. Enhance user convenience by offering more e-payment options.
Multichannel single-site management platform	Develop a multichannel, single-site management platform for e-commerce brand manufacturers, encompassing product procurement, inventory management, integrated channel orders, shipping operations, and sales data analysis to boost operational efficiency.
M+/M+ Meet	Enhance large-scale video conferencing to include landline and mobile phone outbound invitation calls, and provide AI multilanguage translation and verbatim transcription features. Offer an instant messaging integration suite for large e-commerce platforms.
MyCharge	Establish a charging station management platform to oversee charging piles across the nation.
MyVideo	Support more smart TV systems to attract users. Integrate AI technology to provide users with higher-quality video services.
Number masking service	Use AI model to develop abnormal call detection functionality.
Smarter Home	Support the Matter IoT Standard to create a new cross-brand and more diversified smart home AIoT ecosystem.
MyMoji	Expand the sticker mall and 3D Avatar modeling functionality to provide features such as changing clothes and hairstyles. Integrate TWM Customer Service App to explore interactive applications.
Intelligent product hashtag	Develop an intelligent system that links a hashtag to products in the same category to boost product recommendations.
momo retail media network (RMN) system	Provide targeted advertising services and plans based on analysis of consumers' behavior.
momo payment gateway	Establish a credit card payment gateway to provide credit card authorization services. The gateway can automatically connect different acquiring banks based on the customer's card type to decrease transaction fees.

Forecast research and development expenses

The projected research and development expense for 2024 is NT\$692.107 million.

Regulatory changes and developments

1. The NCC determines companies with significant market power in specific telecommunications areas

(1) Status

On May 10, 2023, the National Communications Commission (NCC) determined that the Company holds significant market power (SMP) in the mobile communication network voice connection market. Aside from adhering to the upper limits on termination rates set by SMP regulations, the Company complies with other relevant regulatory measures. These include disclosing essential interconnection information on the Company's website, avoiding price discrimination against other telecommunications operators, providing interconnection information upon reasonable requests from other telecommunications operators, segmenting network components, and establishing network interconnection points at technically feasible locations.

(2) Countermeasures

The Company complies with the obligations outlined in the NCC announcements.

2. The government started accepting applications for 4.8-4.9GHz dedicated telecommunications networks for mobile broadband on June 5, 2023

(1) Status

To meet the innovative development demands of 5G vertical applications and in line with the Executive Yuan's plan to promote 5G dedicated telecommunications networks, the Ministry of Digital Affairs announced the Regulations Governing the Establishment and Use of Mobile Broadband Dedicated Telecommunications Networks on June 1, 2023. Starting on June 5 that year, the Administration for Digital Industries began accepting applications for dedicated telecommunications networks for mobile broadband.

(2) Countermeasures

The Company has solutions in place for 5G dedicated telecommunications networks to meet demand when the government released spectrums for application.

3. The NCC approved a reduction in the wholesale IP peering price for Chunghwa Telecom Co., Ltd. starting from April 1, 2023

(1) Status

The NCC announced the price adjustment coefficient that should be applied to fixed communication services, which factors in changes in the consumer price index. Based on the price adjustment coefficient and the consumer price index, the NCC approved a reduction in the wholesale IP peering price for Chunghwa Telecom Co., Ltd., from NT\$51/Mbps to NT\$37/Mbps starting on April 1, 2023, a decrease of 27.45%, which should help lower the Company's internet interconnection costs.

(2) Countermeasures

The Company will continue to strengthen its broadband internet service, provide diversified internet access routes and ensure stable broadband internet access quality.

4. The NCC approved the implementation of fixed and mobile networks' termination rates, effective June 5, 2023

(3) Status

To facilitate market competition, the NCC approved new fixed and mobile termination rates, which took effect on June 5, 2023. The rates are as follows:

a. Fixed termination rates:

Unit : NT\$/minute

Call Type		2023.01.01~ 2023.06.04	2023.06.05- 2023.12.31	2024	2025	2026
Fixed-to-Fixed (Local)	Peak hours	0.32	0.3	0.28	0.26	0.24
	Off-peak hours	0.09	0.09	0.08	0.08	0.08
Fixed-to-Fixed (Long distance incoming/ outgoing call, international outgoing call)	Peak/Off-peak hours	0.32	0.31	0.29	0.28	0.27
Mobile-to-Fixed	Peak hours	0.4349	0.3943	0.3575	0.3241	0.2939
	Off-peak hours	0.2059	0.1883	0.1722	0.1575	0.1440

b. Mobile termination rate:

Effective January 1, 2024, the mobile termination rate was lowered from NT\$0.443 to NT\$0.407 per minute.

(4) Countermeasures

The reduction in termination rates can lower network operating costs, facilitate investment in 5G-related application services, enhance user experience, and promote the development of telecommunications services.

5. The NCC announced the Guidelines for the Risk Management Mechanism in the Application of Telecommunication Services by Telecommunications Enterprises on June 16, 2023

(5) Status

To more effectively combat fraud, the NCC formulated the Guidelines for Risk Management Mechanism in the Application of Telecommunication Services by Telecommunications Enterprises in accordance with Article 165 of the Administrative Procedure Act, Article 37 of the Telecommunications Management Act and Article 26 of the Regulations for Allocating and Governing Telecommunications Numbers. The guidelines stipulate that telecommunications operators should strengthen their customer risk management mechanism (KYC), including implementing dual-document verification, taking a photo onsite and restricting application methods for first timers. They also call for the establishment of an independent audit department and limiting phone number applications for non-citizens (such as one number per identification document). Furthermore, the guidelines outline a comprehensive management mechanism for enterprise clients applying for mobile numbers under various scenarios. This includes criteria such as ensuring that the number of applications does not exceed the number of company employees, requiring high-risk customers to explain their purpose in applying for a number, and creating a list of users.

(6) Countermeasures

The Company is committed to implementing the customer risk management mechanism in accordance with the guidelines, and collaborating with the NCC and law enforcement agencies to jointly combat telecommunications fraud.

Technology changes and development

1. Mobile network

(1) Status

The Company's merger with Taiwan Star and Far EasTone's merger with Asia Pacific Telecom were both approved by the regulatory authorities in 2023. Taiwan Mobile officially merged with Taiwan Star on December 1, 2023. Following these mergers, the telecommunications market shifted from a structure comprising three major and two smaller operators to one dominated by three significant entities. According to an announcement by the NCC in November 2023, which calculated subscriber numbers excluding those with 040 prefixes, the gap in subscriber numbers between the newly merged Taiwan Mobile, Far EasTone and the leader, Chunghwa Telecom, has narrowed from between 3.87 million and 3.92 million to between 1.46 million and 1.92 million. With Taiwan Mobile and Far EasTone now possessing the capacity to challenge Chunghwa Telecom's dominance, the competition landscape has shifted from one focused on pricing to value. Meanwhile, as 5G applications are still in the early stage, the acquisition and retention of mobile subscribers and their contribution to ARPU remain the main sources of revenue growth.

According to the "2023 Global Consumer 5G Report" published by Ericsson in 2023, about 50% of consumers in Taiwan still consider network performance the most important factor when choosing a telecom service provider, and that 11% of consumers favor innovative tariff plans. Both percentages were higher than the global averages, suggesting that ensuring an optimal user experience continues to be key in customer management.

(2) Countermeasures

To enhance the user experience for Taiwan Mobile and Taiwan Star subscribers after the integration, the Company adopted a Multiple Operator Core Network (MOCN) approach so that users experience no change or disruption in service. Post-merger, the Company expanded its 4G 2100MHz network bandwidth to 20MHzx2 in December 2023.

TWM aims to complete overall integration of the two companies' base stations within one year, maximizing spectrum utilization and reducing network maintenance costs. Upon completion, both Taiwan Mobile and Taiwan Star users will experience improved coverage and significantly enhanced internet speeds. The maximum download speeds for 4G will exceed 800Mbps for 4G and, with enhanced terminal capabilities, will surpass 2.0Gbps for 5G after the integration.

2. Mobile voice services

(1) Status

Since operators launched free VoLTE voice services in August 2022, VoLTE subscription has grown significantly. In 2023, TWM subscriber numbers grew from 1.58 million in January to 6.67 million in December, an increase of 321%. As consumer behavior shifts, the use of 3G voice communication services has also continued to decline, with total outgoing call minutes dropping 16.3% from the third quarter of last year to the second quarter of this year. With the NCC planning to terminate 3G services, the Company must accelerate the expansion of network equipment to prepare for its shutdown this year.

(2) Countermeasures

On December 1, 2023, coinciding with the benchmark date of the merger with Taiwan Star, the Company completed the integration of Taiwan Star's 3G network, improving voice and SMS coverage in remote and indoor areas for the users of the original Taiwan Star network. TWM has continued to expand the capacity of the voice core network and enhance redundancy to strengthen network reliability and resilience in response to the growth of VoLTE voice subscribers. Following the comprehensive provision of VoLTE voice services to all Taiwan Mobile users, the Company plans to shut down its 3G network. This would not only reduce maintenance and electricity costs, but also allow the reallocation of the freed-up spectrum resources for the development of 4G/5G infrastructure, thereby providing all users with superior mobile experiences and services.

3. ICT security risks

(1) Risks associated with changes in mobile broadband technology

As mobile technology evolves and 5G develops, ICT security threats, risks and impacts have become more complex and significant. With 5G services expanding the scope of users and applications and increasing the importance of information carried on the network, there are risks of leakage or improper use of private and personal data, such as digital footprints. Meanwhile, 5G's larger capacity to support more IoT devices also opens it to risks of devices being infected with a virus and attacking the 5G system. Challenges to the resilience of the 5G system will increase from a personal level to the wider issue of information security of an enterprise, society and the nation.

In addition, as telecommunications services gradually move toward an open architecture, there is also the enhanced information security risk that software may generate.

(2) Countermeasures

In the face of these threats to information security, TWM has adopted a consistent all-round thinking, planning and deploying information security equipment, improving network strength, identifying possible types of threats, and taking corresponding protective and control measures through system implementation, standard operating procedures, personnel training and reinforcement. TWM has also maintained a prudent attitude toward new architecture, software and functions, and will not blindly pursue innovation and speed, but will carefully evaluate, verify and implement measures.

Impact of changes in brand image on the Company's risk management policies in 2023 up to the publication date in 2024:

The Company has long built up a sound image among investors and customers for its continuing efforts to enhance corporate governance, network communication quality, customer service and corporate sustainability. These efforts won numerous recognitions and awards in 2023 (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 2023 up to the publication date in 2024:

1. Expected benefits from Taiwan Mobile and Taiwan Star merger:
Enlarge customer base and spectrum resources to achieve greater economies of scale.
2. Possible risks and response actions:
 - a. On December 30, 2021, TWM's Board of Directors approved the acquisition of Taiwan Star. The share swap ratio was set at one Taiwan Star share for 0.03261 TWM shares. The Financial Supervisory Commission approved TWM's issuance of 204,028,208 new shares for the acquisition and the change of registration was completed on December 29, 2023.

Expected benefits and risks related to plant facility expansions in 2023 up to the publication date in 2024:

Not applicable as the Company is not a manufacturer.

Risks from supplier and buyer concentration in 2023 up to the publication date in 2024:

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 2023 up to the publication date in 2024: None.

Changes in management controls in 2023 up to the publication date in 2024: None.

Significant lawsuits and non-litigious matters in 2023 up to the publication date in 2024

1. The Company:

(1) Spectrum dispute between Far EastTone Telecommunications Co., Ltd. (“FET”) and Taiwan Mobile (“the Company”)

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

In August 2015, FET filed a civil complaint with the Taipei District Court (“District Court”) demanding that the Company: (i) file an application to return the C4 spectrum block; (ii) stop using the C4 spectrum block; (iii) stop using the C1 spectrum block until its application for the return of the C4 spectrum block is approved by the NCC; and (iv) pay NT\$1,005.800 million to FET as compensation.

In May 2016, the District Court ruled in favor of FET on claims (i), (ii) and (iii), and against FET on claim (iv). TWM and FET appealed these decisions to the High Court. The High Court dismissed TWM's appeal on claims (i), (ii) and (iii), and modified the judgment on claim (iv), ordering TWM to pay FET NT\$765.779 million, as well as a 5% annual interest on NT\$152.584 million of the aforementioned amount from September 5, 2015, until the payment date. TWM and FET appealed the rulings.

In May 2019, the Supreme Court dismissed the High Court's judgment in regard to FET's additional appeals, eliminated TWM's payment obligation, and remanded the case to the High Court. During the first retrial, TWM filed a counterclaim demanding FET pay NT\$14.482 million, plus a 5% annual interest from the day after the counterclaim is served until the settlement date. In August 2020, the High Court ruled as follows: for the dismissed claim (iv), TWM must pay FET NT\$242.154 million, plus a 5% annual interest on NT\$142.685 million of the aforementioned amount from September 30, 2016, to the payment date, and a 5% annual interest on NT\$99.469 million from July 21, 2017, to the payment date. The Company's counterclaim was denied. The Company and FET appealed the rulings. In June 2023, the Supreme Court dismissed the first retrial of the High Court and remanded the case to the High Court. The case is now in process at the second retrial of the High Court.

2. The Company's directors, general manager, executives, major shareholders hold 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 they are accidentally leaked, the Company could be held legally responsible, which could seriously damage its reputation.

Countermeasures:

TWM has implemented the ISO/IEC 27001 – Information Security Management System (ISMS) and BS 10012, ISO/IEC 27701, 29100 – Personal Information Management System (PIMS). The Company's Cyber Security and Data Privacy Protection Committee reviews 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 has also purchased cybersecurity insurance for advanced customer data protection. Furthermore, to ensure a four-dimensional protection of users' personal data and internal confidential data, the Company has implemented the following:

1. Stopping external hackers: Intrusion prevention, network segmentation, firewalls, web application firewalls, etc.
2. Preventing internal leaks: Conduct data leakage protection detection and strengthen gap reinforcement measures.
3. System planning and development: Incorporate system development security specifications and execute code 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