

2023 Consolidated Projected Cash Flow

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
14,934,740	30,419,001	29,875,053	15,478,688	—	—

Source of Funding for Negative Cash Flow in 2023: 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 Plan

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 2022, on a consolidated basis, TWM's investment income from long-term investments under the equity method amounted to NT\$10,145 thousand. 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

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.

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 2022 up to the publication date in 2023.

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
Anti-phishing solution	Use AI machine learning algorithms to identify phishing websites.
Storefront outbound call recording system	Develop outbound call recording system to facilitate customer relationship management for myfone stores.
Customer fraud/credit control	Use big data and rule engine framework to detect abnormal behavior in customer usage or transactions (ex. telco/non-telco services).
OP Pay Later: credit check and promotion system	Develop a system that checks a customer's credit status when he/she wants to purchase an item that exceeds his/her credit limit. The system would check the customer's credit status and adjust his/her credit limit within manageable risks. Assist marketing department in developing creative and interactive promotional events to attract more customers. The system would also support third-party product promotion and advertising.
M+	Develop a large-scale interactive videoconferencing system for enterprises to allow more users to take part simultaneously in the group chat, vote and share a virtual whiteboard.
MyVideo	Offer new streaming formats with home-cinema quality. Enhance encryption security for different devices.
MyMusic	Develop Podcast community service and participate in momo coin ecosystem.
Number masking service	Provide comprehensive management interface and simplify integration steps and efforts to reduce barriers in enterprise application integration.
Smarter Home	Support the Matter IoT Standard to create a new cross-brand and more diversified smart home AIoT ecosystem.
Intelligent product hashtag	Develop an intelligent system that links a hashtag to products in the same category to boost product recommendations.

Forecast research and development expenses

The projected research and development expense for 2023 is NT\$448.587 million.

Regulatory changes and developments

1. The Telecommunications Consumer Mediation Center (TCMC) was founded on July 1, 2022

(1) Status

Pursuant to the provisions of paragraph 1, article 20 of the Telecommunications Management Act, the NCC appointed seven telecommunications operators to jointly establish the TCMC to take charge of accepting and mediating consumer complaints. The NCC supervises the operation of the center and intervenes only when there are major consumer disputes or when it is urgent.

(2) Countermeasures

The Company works with the TCMC to protect the rights of consumers and handle consumer complaints properly.

2. The government plans to accept applications for 4.8-4.9GHz dedicated telecommunication network for mobile broadband in 2023

(1) Status

In line with the Executive Yuan's policy to build a 5G dedicated spectrum and telecommunication network and provide innovative services, the government plans to accept applications for 4.8-4.9GHz dedicated telecommunication network for mobile broadband in 2023. The government is still working on the draft of the

Regulations Governing the Establishment and Use of Dedicated Telecommunications Networks to discuss whether to deregulate public telecommunications network access and infrastructure sharing of radio access network.

(2) Countermeasures

The Company continues constant communication with the government about the draft bill. While the government releases such spectrum for application, the Company will make efforts to plan solutions for the 5G dedicated spectrum and telecommunication network to meet market demand.

3. The Ministry of Digital Affairs (moda) was founded on August 27, 2022

(1) Status

With the establishment of the moda, it took over some of the tasks that were assigned to the NCC, including infrastructure and cybersecurity, telecommunications universal service, spectrum planning, number and website address management, telecommunications industry counsel and awards, and management of telecommunications industry related funds. The change allows the NCC to focus on its role as an independent regulator in charge of policy making and overseeing network communication and internet content classification.

(2) Countermeasures

The Company collaborates and continues effective communication with the government.

4. The moda accepts the bandwidth applications for fixed communications services of low Earth orbit (LEO) satellites

(1) Status

On November 7, 2022, the moda announced the "Matters Concerning Applications of Telecommunications Enterprises for the Assignment of Radio Frequency for Fixed-Satellite Service" for application of the spectrum for the fixed satellite communication. From November 8 to December 30, 2022, the moda accepted telecom operators' applications for Ku/Ka frequency bands (10.7~12.7GHz, 13.75~14.5GHz, 17.7~20.2GHz, and 27.5~30.0GHz) for geo-sync and non-geo-sync orbit. LEO satellites could be used as backhaul in outlying islands and remote areas in order for increasing coverage of these areas, as well as provide emergency backup to optimize telecommunication network resiliency.

(2) Countermeasures

The Company cooperates with the government and international satellite service providers to formulate testing and verification mechanisms.

5. The NCC approved Chunghwa Telecom's plan to reduce wholesale IP peering price

(1) Status

Based on the applicable tariff adjustment coefficient of the fixed network telecommunications business announced by the NCC and the consumer price index published by the Directorate General of Budget, Accounting and Statistics (DGBAS), the NCC approved Chunghwa Telecom's new wholesale pricing scheme, which lowered the private peering price of IP network interconnections by 16.39%, from NT\$61 per Mbps to NT\$51 per Mbps. This scheme took effect retroactively on April 1, 2022.

(2) Countermeasures

The Company continues to strengthen global network capability to provide diverse internet routing and stable broadband quality.

6. The NCC reduced the mobile-to-fixed termination rates on December 7, 2022

(1) Status

To facilitate market competition, the NCC on December 7, 2022 announced that the mobile-to-fixed termination rate would be lowered from NT\$0.4383 to NT\$0.4349 per minute for peak hours, and from NT\$0.2184 to NT\$0.2059 per minute for off-peak hours. The new rates were implemented on January 1, 2023.

(2) Countermeasures

The Company evaluates market demand and optimizes 5G-related application services to improve user experience and facilitate the development of the telecommunications industry.

Technology changes and development

1. Mobile broadband access network

(1) Status

In 2022, TWM's peers not only increased their bandwidth via spectrum acquisition and network sharing deals, but also continued their aggressive 5G network build-out. Meanwhile, Taiwan Mobile's network expansion plan has been affected as the merger with Taiwan Star is still under review by regulators.

(2) Countermeasures

An analysis by Taiwan Mobile showed that users do not require extremely high data speed in most usage scenarios. TWM's network investment strategy of prioritizing expansion in metropolitan areas and high usage hot spots proved to be effective in offering a competitive user experience. Its 5G N700 band offers superior propagation characteristics and was an effective tool in balancing competitors' deployment advantage. After the merger of Taiwan Mobile and Taiwan Star is formally approved by regulators, the integration of spectrum and base station resources will be carried out as soon as possible to maximize synergies.

2. Mobile voice services

(1) Status

Since operators launched free VoLTE voice services in August 2022, VoLTE subscription has grown significantly. The National Communications Commission (NCC) has called on mobile service providers to phase out their 3G networks. Chunghwa Telecom and Far EasTone have agreed to terminate their 3G services by June 2024. Taiwan Mobile is also considering the same move. As such, VoLTE related capacity needs to be expanded.

(2) Countermeasures

To accommodate the growth of VoLTE users, TWM will continue to expand core voice network capacity, while redundant multi-site will be shut down to increase network reliability and resiliency. Shutting down TWM's 3G network should reduce maintenance and power-related expenses and release more spectrum for 4G/5G services.

3. ICT security risks

(1) Risk changes in the development of 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 privacy 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 2022 up to the publication date in 2023:

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 2022 (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 2022 up to the publication date in 2023:

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. Merger is awaiting approval by the FTC and the TWSE.
 - b. The NCC has given its conditional approval for the merger. One of the conditions is that the Company return 10MHz sub 1GHz spectrum without any compensation by June 30, 2024. If the aforementioned spectrum is not returned by that date, TWM will have to sell the spectrum. These are completely dependent on the willingness of other spectrum holders, namely its competitors. The Board of Directors thinks these alternatives are unfair and impossible to execute.
 - c. The board has asked management to study the possibility of taking legal action.

Expected benefits and risks related to plant facility expansions in 2022 up to the publication date in 2022:

Not applicable as the Company is not a manufacturer.

Risks from supplier and buyer concentration in 2022 up to the publication date in 2023:

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 2022 up to the publication date in 2023: None.

Changes in management controls in 2022 up to the publication date in 2023: None.
Significant lawsuits and non-litigious matters in 2022 up to the publication date in 2023

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 judgment 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 rate on NT\$152,583,658 of the aforementioned amount from September 5, 2015 until the payment date.

The Company appealed the High Court’s ruling to the Supreme Court. In May 2019, the Supreme Court overruled the High Court’s judgment in regard to (1) FET’s other appeal, (2) the Company’s payment obligation, and (3) litigation expenses with respect to the aforementioned two items, and remanded the case 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 section 2 below, 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 preceding section 1, TWM shall pay FET NT\$242,153,783, as well as a 5% annual interest rate on NT\$99,468,550 from July 21, 2017 until the payment date and a 5% annual interest rate on NT\$142,685,233 from September 30, 2016 until the payment date.
- (3) The rest of the appeal 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 responsibility for the rest.
- (5) Regarding the portion of TWM’s payment as ruled, FET may 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 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. External anti-hackers: Build intrusion prevention, network segmentation, firewall, web application firewall, etc.
2. Internal leakage prevention: Handle data leakage protection detection and 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