

Projected consolidated cash flow for 2022

1. Projected cash inflow from operating activities: Expected to remain relatively stable
2. Projected cash outflow from investment activities: For capital expenditure
3. Projected cash outflow from financing activities: For cash dividend distribution

2022 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
15,402,025	31,117,904	30,970,535	15,549,394	—	—

Source of Funding for Negative Cash Flow in 2022: 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 activities and expand into new fields to create synergies.

In 2021, on a consolidated basis, TWM's investment loss from long-term investments under the equity method amounted to NT\$19.681 million due to COVID-19's impact on operations. 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 2021 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.

3. Impact of inflation

Inflation had a minor impact on the Company's operating performance in 2021 up to the publication date in 2022.

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
AI inspector	Use AI machine vision and robotic process automation (RPA) technology to automatically audit application forms.
Intelligence collection model	Use AI machine learning algorithms to optimize collection process.
myfone online service	Design a customer-centric self-service system that encourages users to subscribe to and purchase TWM products online.
M+ Messenger	Provide video conferencing recording function to fulfill remote insurance application. Enable walled garden enterprise IM to enhance business operation security.
myVideo	Develop 5G video applications and provide interactive AR/VR services. Enhance streaming video security and quality.
MyMusic	Enhance podcast functions for producers to enrich audio-related services. Build a gamification platform, increase multiple payment methods, and improve membership management.
Number masking service	Provide comprehensive APIs and VoIP SDK for easy enterprise applications integration.
Smarter Home	Enrich Smarter Home ecosystem and extend 070 VoIP service to conventional home phones and the Smarter Home app.
Smart customer service platform upgrade	Upgrade momo's smart customer service system to provide timely responses, answer customers' questions promptly, reduce manpower needs and improve customer satisfaction through the introduction of new functions.

Expected research and development expenses

The projected research and development expense for 2022 is NT\$311.119 million.

Regulatory changes and developments

1. The Legislative Yuan approved the formation of a digital development ministry

(1) Status

On Dec. 28, 2021, the Legislative Yuan approved a new law to establish a ministry of digital development. The new ministry is expected to be established in the middle of 2022 at the earliest, and will be in charge of planning the nation's digital development policies, which currently fall under the purview of the NCC, the National Development Council, the Department of Posts and Telecommunications, the Technology Division of the Ministry of Economic Affairs, and the Information Security Division of the Executive Yuan.

(2) Countermeasures

The Company is paying close attention to the progress of the organizational changes.

2. The NCC announced a draft Digital Communications Act

(1) Status

On Dec. 29, 2021, the NCC announced its draft Digital Communications Act, which includes provisions that would require popular platforms such as YouTube and Meta (Facebook) to be more transparent about their regulations on taking actions against user posts, establish more self-regulatory measures, as well as be governed by third-party units or laws. The NCC is expected to publish the full text of the law in 2022 and organize public hearings to collect opinions and suggestions.

(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.

3. The NCC amended the “Regulations Governing the Use of Radio Frequencies”

(1) Status

On Sept. 1, 2021, the NCC removed the overall caps on usage bandwidth, expanded the upper limit of the usable bandwidth above the 24GHz band, and added the 2100MHz band as a frequency sharing band, which is limited to mobile voice services only.

(2) Countermeasures

The Company is paying close attention to the enhancement of spectrum utilization efficiency and energy-saving benefits through frequency sharing.

4. The NCC announced the policy consultation document for 4.8-4.9GHz dedicated telecommunication network for mobile broadband

(1) Status

In order to meet the needs of 5G vertical application development and to cooperate with the Executive Yuan's plan to open 4.8-4.9GHz band for establishment and use of dedicated 5G telecommunications networks from 2021 to 2022, the NCC on April 13, 2021, conducted a public hearing to gather opinions from industry members. The draft regulation is still under development.

(2) Countermeasures

The Company has come up with different solutions with other industries to develop 5G innovation services. It will continue to monitor the progress of the proposed bill and reinforce communication with the NCC in hopes of maintaining a regulatory environment conducive to the industry's development.

5. The Ministry of Transportation and Communications intends to revise the “Radio Frequency Supply Plan”

(1) Status

In response to the development needs of next generation satellite communication, the Ministry of Transportation and Communications (MOTC) has proposed changes to the Radio Frequency Supply Plan and held a public briefing on Oct. 5, 2021. Under its plan, the following frequency bands are to be released in phases for next generation satellite communication usage: 10,700-12,700MHz, 14,000-14,500MHz, 17,700-20,200MHz and 27,500-30,000MHz.

(2) Countermeasures

Low-orbit satellites can boost internet penetration in rural areas. The Company is closely monitoring the progress of industry needs and continues to communicate with the government in hopes of maintaining a regulatory environment conducive to the industry's development.

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

(1) Status

The NCC approved Chunghwa Telecom's new wholesale pricing scheme, which lowered the private peering price of IP network interconnections by 17.57%, from NT\$74 per Mbps to NT\$61 per Mbps. This scheme took effect retroactively on April 1, 2021.

(2) Countermeasures

The Company will keep offering various digital economy services to satisfy clients' needs.

Technology changes and development

1. Mobile broadband access network

(1) Status

Other major 5G players have significantly accelerated 5G rollout in 2021, driving market competition to a higher level. The 5G equipment deployed in 2020 also resulted in more depreciation and amortization financially for the company.

(2) Countermeasures

After the merger of Taiwan Star Telecom with Taiwan Mobile is approved by the authorities, Taiwan Mobile will possess the industry's largest 3.5GHz bandwidth, reducing the demand for deploying base stations due to congestion. By combining the base stations of the two companies, Taiwan Mobile will be able to reduce operational expenses and improve profitability. In addition, Taiwan Mobile continued to optimize the network and develop technologies to enhance users' 5G experience to accelerate the migration to 5G services. In 2021, the Company completed several software upgrades to improve upload and download performance and optimize network settings to solve the problems of poor user experience at 4G/5G borders. It is also the first 5G stand-alone network provider in Taiwan to pass the NCC certification for commercialization. Besides seeking various subsidies for 5G construction, the Company is enhancing the smart power-saving function of 4G and 5G base station equipment to reduce energy consumption.

2. IDC and cloud related services

(1) Status

Global demand for cloud services continues to drive cloud service providers to deploy cloud data centers. Innovative new services focus on "edge computing" architecture and "decentralized cloud" solutions. Data localization, sustainable development and community development are key issues.

(2) Countermeasures

As a major provider of cloud services and data centers, Taiwan Mobile continues to cooperate with other cloud service providers to develop AI solutions and high-performance computing services. Besides providing hybrid cloud solutions, edge computing and data landing solutions, the Company has also cooperated with international gaming companies and content service providers to deliver real-time and high-quality services. Its cloud data center was designed to achieve PUE 1.5. Taiwan Mobile is also committed to using green energy to reduce carbon emissions.

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, with proprietary telecom technology adopting TCP/IP, the network complexity and information security risks of telecom operators have greatly increased. 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 various possible types of threats, and taking corresponding protective and control measures through system implementation, standard operating procedures, personnel training and reinforcement. TWM has also adopted a prudent attitude toward new architecture, software and functions, and will not blindly seek innovation and speed, but will evaluate, verify and implement measures step by step.

Impact of changes in brand image on the Company's risk management policies in 2021 up to the publication date in 2022:

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 2021 (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 2021 up to the publication date in 2022:

1. Expected benefits:
 - a. Expand business scale
 - b. Generate economies of scale
 - c. Position for earnings growth
 - d. Enhance customer satisfaction
 - e. Enlarge customer base and spectrum resources to achieve greater economies of scale
2. Possible risks and response actions:
 - a. Subject to approvals by regulatory authorities
 - b. Target completion deadline is no later than Dec. 31, 2022, with the option of extensions if agreed upon by the two parties

Expected benefits and risks related to plant facility expansions in 2021 up to the publication date in 2022:

Not applicable as the Company is not a manufacturer.

Risks from supplier and buyer concentration in 2021 up to the publication date in 2022:

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 2021 up to the publication date in 2022: None.

Changes in management controls in 2021 up to the publication date in 2022: None.

Significant lawsuits and non-litigious matters in 2021 up to the publication date in 2022

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 aforementioned 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% annual 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 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:

- (1) **Channel license fee dispute between Best News Entertainment Co., Ltd. and TFN Media Co., Ltd., Yeong Jia Leh Cable TV Co., Ltd., Globalview CATV Co., Ltd., Phoenix Cable TV Co., Ltd. and Union Cable TV Co., Ltd. (hereinafter referred to as "TFM Co.," "YJL Co.," "Globalview Co.," "Phoenix Co.," "Union Co.," and collectively referred to as "TFM Co. and its subsidiaries")**

Parties Involved: Best News Co. (plaintiff) vs. TFM Co. and its subsidiaries (defendants)

Grounds for Lawsuit:

Best News Co. claimed that TFM Co. and its subsidiaries in 2019 publicly broadcast the following channels – ERA News, MUCH TV, AZIO TV, Hollywood Movie, Discovery Travel and Living, Disney HD, USTV, BNV and NEXT TV – without obtaining authorization from their agent, Best News Co. TFM Co. and its subsidiaries are therefore requested to pay license fees amounting to NT\$81,663,072.

Status:

On May 10, 2021 Best News Co. filed a civil lawsuit with the Taiwan Shilin District Court ("Shilin District Court"). On June 28, 2021 Shilin District Court transferred the case to the Intellectual Property and Commercial Court ("IP Court"), which has yet to start a hearing.

- (2) **Channel license fee dispute between Dongyu Investment Co., Ltd. ("Dongyu") and TFM Co. and its subsidiaries**

Parties Involved: Dongyu (plaintiff) vs. TFM Co. and its subsidiaries (defendants)

Grounds for Lawsuit:

Dongyu claimed that TFM Co. and its subsidiaries in 2019 publicly broadcast the following channels – Top TV, Rainbow Channel, Sanlih Taiwan Channel, Sanlih City Channel, SET News, NHK World Premium and MTV – without obtaining authorization from their agent, Dongyu. TFM Co. and its subsidiaries are thereby requested to pay license fees amounting to NT\$96,162,432.

Status:

On May 10, 2021 Dongyu filed a civil lawsuit with the Shilin District Court. On June 30, 2021 the Shilin District Court transferred the case to the IP Court, which has yet to start a hearing.

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, 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– Personal Information Management System (PIMS) certifications. 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. 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