FLASH

SCB EIC

# The Next Step of Thailand's Telecommunications Market

## Post-Spectrum Auction

11 July 2025

# The Next Step of Thailand's Telecommunications Market Post-Spectrum Auction

## KEY SUMMARY

**In the spectrum auction held on June 29, 2025, both AIS and True acquired the rights to the same frequency bands they previously leased from NT, ensuring the continuity of their quality service.**

The National Broadcasting and Telecommunications Commission (NBTC) organized the auction for frequency bands with concessions expiring in 2025. These include the 850 MHz, 2100 MHz, 2300 MHz, and 1500 MHz bands. Only two bidders participated in the auction:

1. True successfully secured two bands: 2300 MHz band (70 MHz), previously leased from NT, as well as the 1500 MHz band (20 MHz).
2. AIS, which won the 2100 MHz band (30 MHz), also formerly leased from NT.

The outcome of this auction allows both operators to maintain their current service quality by transitioning from leasing from NT to directly holding concessions for those frequency bands.

**The transition from leasing to direct concession ownership by service providers will help reduce long-term spectrum costs and enhance opportunities for investment in future technologies.**

The acquisition of direct spectrum concessions provides a significant financial advantage to providers by reducing annual spectrum cost from previous lease payments of 3.9 to 4.5 billion baht per year to an average annual license fee of approximately 0.99 to 1.7 billion baht over a 15-year term, depending on the winning bid price. This cost reduction will enhance investment opportunities aligned with the providers' strategic plans, which prioritize upgrading network efficiency and innovation. Key areas of focus include the integration of AI to optimize network performance and efficiency, upgrading the network to 5G-Advanced to improve service stability, developing new digital services and applications such as augmented and virtual reality (AR/VR) and smart devices, as well as preparations for the future adoption of 6G technology.

**However, Unallocated frequency band could limit consumers' access to higher-quality services in the future. Furturemore, the relatively low auction proceeds may affect the government's plans for national digital infrastructure development.** The lack of bidding interest of the 850 MHz and 1500 MHz frequency bands may result in missed opportunities for consumers to benefit from higher-quality services enabled by characteristics of these bands—such as improved 5 speeds and more stable connectivity in remote areas. Furthermore, the resulting low auction proceeds could impact the national digital infrastructure development plan, as revenue from spectrum auctions is a key source of funding for enhancing the country's digital competitiveness.

**Government policies that actively promote market competition are essential for delivering tangible benefits to consumers and driving the long-term development of the country's digital technology.**

Thailand's current telecommunications market, a duopoly with only two major providers, has limited consumers choice and diminished price competition. Therefore, designing policies to restore competition pressure presents a significant challenge for the government. Key policy considerations include:

1. Supporting the entry of Mobile Virtual Network Operators (MVNOs) to increase market participation;
2. Implementing robust regulations on pricing and service quality, such as setting minimum standards for service packages (price, data, and speed) that are benchmarked against providers' cost structures and spectrum characteristics
3. Strategically reviewing the parameters for future auctions (e.g., bands, allocation sizes, reserve prices) to ensure alignment with market conditions, service providers' network development plans, and the national digital economy development strategy.

## KEY POINTS

On June 29, 2025, the Office of the National Broadcasting and Telecommunications Commission (NBTC) held a spectrum auction for four International Mobile Telecommunications (IMT) frequency bands. This auction was necessary as the existing concession contracts were set to expire on August 3, 2025. The spectrum offered comprised two distinct categories: (1) previously used for telecommunication and re-auctioned to ensure service continuity, including 850 MHz (20 MHz), 2100 MHz (30 MHz), and 2300 MHz (70 MHz); and (2) repurposed spectrum, namely 1500 MHz (55 MHz), which was previously used for petroleum exploration and rural public telephone, both of which have seen declining usage. Consequently, the NBTC reallocated the 1500 MHz band for 4G/5G technologies that align with international standards and is supported by the mature ecosystem of over 300 compatible device models.

**AIS and True both focused their bidding strategies on securing the frequency bands currently operate under leased from NT.** The recent spectrum auction was characterized by limited participation, with only two participants AIS and True submitting bids. The auction process concluded swiftly, taking approximately one hour, in contrast to five-hour 5G auction in 2020 and the 65-hour 4G auction in 2015. Moreover, the winning bids exceeded the NBTC's reserve prices by only 10%–20%, reflecting a relatively low level of competition in the telecommunications sector following recent market consolidation. This stands in contrast to past auctions, where operators aggressively competed by offering significantly higher bids to secure a competitive advantage in network development.

The NBTC Board officially approved the auction results on July 6, 2025, which was the final day of the legally mandated seven-day certification period. The decision had been postponed from the original date of July 2 to allow for a more comprehensive assessment of the auction's implications. The outcome of this auction (see Figure 1) illustrates the current strategy of providers, who are prioritizing the preservation of existing network capabilities over expansion through newly available frequency bands.

- **True** acquired **70 MHz in the 2300 MHz band** for 21.77 billion baht, a 20% premium over the reserve price. This spectrum can be immediately deployed on the existing 4G and 5G networks, as it is the previously leased from NT prior to the concession's expiration. Additionally, **True secured 20 MHz in the 1500 MHz band** for a total of 4.65 billion baht, a 10% premium over the reserve price. This is a newly allocated band intended to enhance 4G capacity. The 1500 MHz spectrum will help offload traffic from other frequency bands under True's concession, thereby improving network stability in both high-traffic urban areas and remote locations.
- **AIS** won the auction for **30 MHz in the 2100 MHz band** with a total bid value of 14.85 billion baht, a 10% premium over the reserve price. This spectrum can also be immediately utilized on AIS's existing 5G network, as it is the same band previously leased from NT.

**The 850 MHz frequency band**, which was unallocated in this auction, is a low-band spectrum known for its wide signal coverage and strong penetration through buildings and physical obstacles. However, it has limitations in channel capacity and is not suitable for handling high volumes of data traffic. As such, this frequency band is more appropriate for establishing nationwide network coverage. Both AIS and True currently hold comparable amounts of low-band spectrum (700 MHz and 900 MHz), which already support 5G services across the country. Additionally, True had previously leased the 850 MHz band from NT primarily for 3G services, which are now declining in use, while the company's strategy is increasingly focused on developing 5G networks to accommodate growing demand in the near future.

**The 1500 MHz frequency band** serves as a supplementary channel to other 5G bands, enhancing speed and data capacity in high-traffic areas, while also extending 5G signal coverage. This band is newly allocated by the NBTC for telecommunications in Thailand. As a result, service providers acquiring this band must invest in additional specialized equipment, which has limited overall demand for this spectrum. Nevertheless, True's decision to secure 20 MHz in the 1500 MHz band will enable the company to expand its network capacity, improve speed and alleviate network congestion—thereby enhancing service efficiency, particularly in densely populated urban areas.

**Figure 1: Results of the Telecommunications Spectrum Auction on June 29, 2025**

| Spectrum | Frequency Band | Number of Blocks | Reserve Price per Block (Million Baht) | Final Price per Block (Million Baht, % Compared to Reserve Price) | Total Value (Million Baht) | Winning Bidder |
|---|---|---|---|---|---|---|
| 850 MHz | 824-834<br>869-879 | 2x5 MHz<br>2 Block | 7,738.23 | - | - | No Bidders |
| 1500 MHz | 1452-1472 | 5 MHz, 4 Block | 1,057.49 | 1,163.49 (+10%) | 4,653.96 | True |
| 1500 MHz | 1473-1507 | 5 MHz, 7 Block | 1,057.49 | - | - | No Bidders |
| 2100 MHz | 1965-1980<br>2155-2170 | 2x5 MHz<br>3 Block | 4,500.00 | 4,950.00 (+10%) | 14,850.00 | AIS |
| 2300 MHz | 2300-2370 | 10MHz, 7 Block | 2,596.15 | 3,110.00 (+20%) | 21,770.00 | True |

Source: SCB EIC analysis based on data from the NBTC.

**The spectrum acquired in this auction allow both service providers to ensure the continuity of their current service quality. However, the industry will be required additional spectrum to support future growth and technological advancements.** The outcome of the recent auction results the total spectrum holdings of both providers unchanged, with True at 1,350 MHz and AIS at 1,460 MHz (Figure 2). This marks a shift from leasing spectrum from NT to directly concession ownership. Nonetheless, in the longer term, service providers will need to acquire additional spectrum to support network development in response to the continued growth in consumer mobile internet usage, as well as the increasing adoption of automation and AI technologies in the business sector. This outlook is quantified by the NBTC's five-year spectrum allocation plan, which projects that demand for low- and mid-band spectrum will increase from approximately 620 MHz today to 739 MHz by 2029. Additionally, the emergence of 6G technology is expected to drive higher demand for high-band spectrum. To accommodate future

needs, **the NBTC has scheduled the next spectrum auction for 2027**, with plans to allocate mid-band frequencies such as 90 MHz in the 2100 MHz band—whose concession will expire on December 6, 2027—and other unutilized frequencies awaiting allocation, such as portions of the 1800 MHz and 2100 MHz bands, in line with internationally harmonized spectrum usage plans. The auction is also expected to include high-band spectrum, such as the 26 GHz band, which will support investment in 6G development, as well as the 850 MHz and 1500 MHz bands that were unallocated in the current round.

**Figure 2: Spectrum Allocation of Mobile Network Operators Post the 2025 Auction**

| | Low-Band | | Mid-Band | | | | | High-Band | Total (MHz) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 700 MHz (4G/5G) | 900 MHz (2G/3G/4G) | 1500 MHz (4G/5G) | 1800 MHz (2G/4G) | 2100 MHz (3G/4G) | 2300 MHz (4G) | 2600 MHz (4G/5G) | 26 GHz (5G) | Before Auction | After Auction |
| TRUE | 20 | 20 | 20 | 30 | 30 | 70 | 90 | 800 | **1,350** (Leased (90 MHz)) | **1,350** |
| DTAC | 20 | 10 | | 10 | 30 | | - | 200 | | |
| AIS | 40 | 20 | - | 40 | 30 | 30 | - | 100 | 1,200 | **1,460** (Leased (30 MHz)) | **1,460** |
| NT | 10 | - | - | - | - | | - | 400 | **410** | **410** |
| Total (MHz) | 90 | 50 | 20 | 80 | 120 | 70 | 190 | **2,600** | **3,220** | **3,220** |

Allocated from the 2025 Auction  Concession Expiring on December 6, 2027

Source: SCB EIC analysis based on data from True, AIS, and the NBTC.

## How will this spectrum auction impact mobile services

### Transitioning from leasing spectrum to holding direct concessions allow service providers to reduce long-term financial costs and enhance opportunities for investment in new technology development.

The acquisition of direct spectrum concessions provides a significant financial advantage, allowing service providers to transition from annual lease payments to a license cost spread over 15 years. AIS secured the 2100 MHz band at a total cost of 14.85 billion baht (an average of 990 million baht per year), compared to the previous annual lease payment of approximately 3.9 billion baht. Similarly, True obtained the 1500 MHz and 2300 MHz bands with a combined value of 26.423 billion baht (an average of 1.762 billion baht per year), compared to the former lease burden of around 4.51 billion baht per year. **This reduction in financial obligations will provide service providers with greater flexibility to increase investment in developing new technologies to enhance service quality on existing networks.** This aligns with the providers' strategic focus on improving the efficiency of their current

infrastructure, such as deploying AI-driven intelligent networks and expanding 5G-Advanced (5G-A) to increase connection density per area. This allows users in high-traffic areas to enjoy consistent and stable high-speed service without the need to increase the number of base stations. Moreover, the cost savings will also fund the development of new digital technologies, including augmented and virtual reality (AR/VR) and smart devices, as well as preparations for future investment in 6G technologies.

**From another perspective, the outcome of this auction presents notable drawbacks for consumers to access service quality enhancements from unallocated spectrum bands. Furthermore, the relatively low auction proceeds could impact the government's budget for developing the country's digital infrastructure.** The lack of bidding interest in certain frequency bands represents foregone opportunities to improve mobile services. Specifically, the unallocated 850 MHz band could have enhanced 5G stability and speed in remote areas, while the 1500 MHz band could have increased data capacity and internet speed on 5G networks in densely populated areas. —a benefit quantified by the GSMA, which notes the 1500 MHz band can boost network internet speed by up to 130%. Furthermore, the limited revenue generated from this auction may affect national digital infrastructure development plans, as proceeds from spectrum auctions are a key funding source for enhancing the country's digital competitiveness. In the past, this revenue have been allocated to several critical initiatives, including expanding high-speed internet access in remote areas—particularly in schools and hospitals—the Smart City Sandbox project, research and development for new technologies, and the Thailand Digital Valley initiative.

**Nevertheless, government policies that actively promote market competition can enhance consumer benefits and drive long-term development of the country's digital technology.** Given the current structure of Thailand's telecommunications market—where only two major providers offer comprehensive services across mobile networks, fixed broadband, and other technology-related services—market competition remains limited and consumer choice constrained. Therefore, designing policies that effectively strengthen competitive mechanisms presents a key challenge for the government. Such measures may include:

1. **Accelerating efforts to foster greater competition** by supporting smaller network operators, particularly Mobile Virtual Network Operators (MVNOs)[1], and attracting new MVNOs to expand consumer choice. The NBTC has begun requiring spectrum license holders to allocate no less than 10% of their network capacity to MVNOs. Additionally, the NBTC is now studying the potential establishment of a central entity, tentatively named TIMO (Thailand Independent

[1] A Mobile Virtual Network Operator (MVNO) is a service provider that does not own the telecommunications network infrastructure it uses to provide services. Instead, it leases network capacity from major Mobile Network Operators (MNOs)—such as AIS, True, and NT—to offer services under its own brand. MVNOs typically focus on serving niche market segments, for example, budget-focused packages or specialized plans for Internet of Things (IoT) devices.

Mobile Operator), which would act as an intermediary in aggregating the 10% network capacity from spectrum holders and redistributing it to MVNOs at market-reflective prices. This mechanism could help reduce spectrum usage costs for MVNOs. However, it is recognized that the establishment of such an entity is a complex undertaking that will require multiple steps and a considerable implementation period.

2. **Ensuring fair regulation of pricing and service quality**, including the specification of minimum standards for primary packages, in terms of price, usage volume, and speed, as well as network development obligations that reflect operators' spectrum acquisition costs and the technical characteristics of each band. In cases where service providers benefit from relatively low auction prices, the resulting cost savings should be passed on to consumers through fair pricing, while providers should simultaneously be required to improve network quality and coverage to ensure spectrum is used as efficiently as possible.
3. **Reviewing framework for future spectrum auctions**, including frequency bands, allocation volumes, and reserve prices, should be aligned with market conditions, provider network development plans, and the national digital economy strategy, in order to maximize benefits for consumers and promote efficient, systematic use of available spectrum.

In conclusion, designing regulatory policies and auction conditions that comprehensively consider all dimensions will help strike a balance between improving service quality, fostering fair competition, and protecting consumer interests. Ultimately, such efforts will support the advancement of Thailand's digital economy and strengthening its competitiveness on the global stage.

## Author

**KEERATIYA KRONGKAEW** (keeratiya.krongkaew@scb.co.th)

ANALYST

---

## INDUSTRY ANALYSIS

**YUNYONG THAICHAROEN, Ph.D.**

Chief Economist and Sustainability Officer

**PRANIDA SYAMANANDA**

HEAD OF INDUSTRY ANALYSIS

**KAMONMARN JAENGLOM, Ph.D.**

SENIOR ANALYST

**PUNYAPOB TANTIPIDOK**

SENIOR ANALYST

**KEERATIYA KRONGKAEW**

ANALYST

How satisfied are you with this analysis?

# YOUR OPINION IS IMPORTANT TO US

**Please take a 7-question survey to help improve SCB EIC's analysis**

**Click to take the survey**

SCB EIC

"Economic and business intelligence for effective decision making"

# ECONOMIC INTELLIGENCE CENTER

Siam Commercial Bank

**In-depth:**
Economics Indicators

**Impact:**
Business Briefs

**Update:**
Stories that Matter

**Stay connected**
Find us at

@scbeic

www.scbeic.com