The 2023 Global economy is still at a highly uncertain moment, with the cumulative effects of the past three years of adverse shocks. Inflation is declining with rapid rate increases but remains skyrocketed amid financial sector pressure.

Source: Deloitte Analysis, IMF WEO Apr 2023

Note:
1. Asia refers to Emerging and Developing Asia
2. ASEAN refers to ASEAN-5: Indonesia, Malaysia, Philippines, Singapore, Thailand
Key Takeaway:
- Decelerating inflation (4.0% in May 23)
- Decelerating housing price
- Growing employment
- Industrial production grew at a healthy pace
- Retail sales are down sharply
- Significant increase in defaults on junk (high yield) corporate loans

Watchlist:
- ECB might tighten monetary policy more than previously anticipated as the inflation level remained high.
- Russia-Ukraine war and the high inflation may force central banks into more aggressive increase in interest-rate.

EU

Key Takeaway:
- Decelerated inflation in EU
- Growing economy, at a slower pace
- Surge in inflation (6.1% in May 23)
- Sharp rise in food and energy prices
- Weak euro and its fall below parity versus dollar in September

Watchlist:
- Inflation hit a 41-year high in Jan 2023 (slowed to 3.2% in May 23)
- The value of the yen remains weak.
- Soar food price
- Trade deficit in January 2023

Japan

Key Takeaway:
- Recovering tourism sector and domestic demand
- Slower price hikes

Watchlist:
- Inflation hit a 41-year high in Jan 2023 (slowed to 3.2% in May 23)
- The value of the yen remains weak.
- Soar food price
- Trade deficit in January 2023

China

Key Takeaway:
- Recovering PMI
- Easing Covid lockdown
- Deceleration of inflation
- Private sector companies saw declined in profit
- Continuing weakness in the property and construction sectors
- Weak employment

Watchlist:
- China’s central bank cut a key interest rate, signaling a shift in monetary policy
- Sanctions from EU to Chinese companies appearing to support Russia’s war effort
Inflation saw alleviating in several areas; however, central banks still rise interest rates, aiming to stifle the consequences from inflation.

**Inflation Rate**
- Developed countries
- Developing countries & Emerging markets

**Policy Rate**
- Developed countries

Source: Deloitte Analysis, NESDC
Asia saw to drive global economic growth.

Almost 70% of Global economic growth is expected to be contributed by Asia. India, for instance, their economy is resilient, and the growth outlook remains strong.

**2023 Forecasted Global GDP Contribution – By Percentage**

- **Asia**: 68.0%
- **China**: 35%
- **India**: 15%
- **Indonesia**: 9%
- **Other**: 4%
- **Japan**: 2%
- **Thailand**: 1%
- **Malaysia**: 1%
- **Western Hemisphere**: 14%
- **Middle East**: 7%
- **Europe**: 4%
- **Africa**: 4%

Source: Deloitte AP, IMF

**Real GDP (seasonally adjusted, level values)**

Source: Deloitte India, CMIE

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Supply shocks saw likely to ease, while cost pass-through will be limited in further period. However, Saudi Arabia to reduce oil output might lift global oil prices.

<table>
<thead>
<tr>
<th>Commodities Price Index (2010=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source:</strong> Deloitte Analysis, World Bank</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commodities Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit:</strong> US dollars</td>
</tr>
</tbody>
</table>

- **Crude oil, Dubai ($/bbl)**
- **Wheat, US HRW ($/mt)**
- **Rice, Thai 5% ($/mt)**
- **Natural gas, US ($/mmbtu)**

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Global economies saw improving, as evidenced from \textit{recovering services area} in 1Q2023 and to be expanding until 2024.

\textbf{PMI - Services}

\textbf{PMI - Manufacturing}

\textit{Source: Bank of Thailand, CEIC, IHS Markit}
However, Asia export has not recovered, whereas China is more relying on domestic production. China’s economy also saw expanding from consumption, service activities, imports, and production.

| Asia export, excluded China |

| China’s economy |

Note: 1) Asia ex China = JP MY SG ID PH KR TW 2) Tech includes electronics equipment, product and machinery
3) Export data in March 2023 consists of SG, KR, TW, MY, and JP

Source: Bank of Thailand, CEIC, WSTS

Note: *Seasonally adjusted
Surge in US debt - insanity of debt-ceiling fight
From $3trn when it was inaugurated in 1989 to more than $31trn, 117% of GDP, today.

Current Situation

- Debt ceiling suspended until Jan 2025
- The bills include paying for federal employees, the military, Social Security and Medicare, as well as interest on the national debt and tax refunds

What would happen if the US defaults on its debt?

Never happened before, but it would cause major economic damage:
- Not be able to pay the salaries of federal and military employees
- Cessation of Social Security cheques - payments that millions of pensioners in the US rely on
- Companies and charities that count on government funds would be in difficult.

Source: Deloitte Analysis, The Economist, BBC

<table>
<thead>
<tr>
<th>Divisive views of the debt limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republican</td>
</tr>
<tr>
<td>• Raising national debt is evidence of out-of-control government</td>
</tr>
</tbody>
</table>

US debt has risen regardless of administration

<table>
<thead>
<tr>
<th>Year</th>
<th>Debt ceiling suspended</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
</tr>
</tbody>
</table>

Sources: National Archives, Federal Reserve Economic Data, BBC research
Recovering private consumption and rising tourist arrival would mainly contribute to Thai economic expansion.

**Key Factors to be Monitored**

- Expanding private consumption
- Recovering tourism sector and returning of tourists from China
- Higher-than-target inflation
- High household debt
- Rising policy rate results in higher cost of loan
- Impacts from Russia-Ukraine war
- Slow growth among other regions

**Source:** Deloitte Analysis, Bank of Thailand, World Bank
Thai economy is forecasted a recovery mainly owing to increasing tourism activities and private consumption. However, slower growth on export, high-household debt, inflation pressure, and the spillover effects from Russia-Ukraine war are crucial factors influencing economic recovery.

Thai Economic Outlook

Source: Deloitte Analysis, Bank of Thailand
Tourism in Thailand is recovering from rising tourist arrival and reopening of the other borders.

**Foreign tourist arrivals Forecast**
Unit: Million Persons

<table>
<thead>
<tr>
<th>Year</th>
<th>Forecast</th>
<th>Actual (as of Jun 23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>39.9</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>11.2</td>
<td></td>
</tr>
<tr>
<td>2023F</td>
<td>29.0</td>
<td></td>
</tr>
<tr>
<td>2024F</td>
<td>35.5</td>
<td></td>
</tr>
</tbody>
</table>

**Foreign tourist arrivals by Month**
Unit: Million Persons

- Nov-21: 0.1
- Jan-22: 0.2
- Mar-22: 0.2
- May-22: 0.3
- Jul-22: 0.5
- Sep-22: 1.1
- Nov-22: 1.2
- Jan-Feb-Mar-Apr-23: 2.2

**Top 5 provinces received income from foreign visitors**
As of Apr 23

- Bangkok: 365 billion THB, 47.4%
- Phuket: 741K
- Chon Buri: 641K
- Chiang Mai: 605K
- Surat Thani: 30.9%
- Others: 10.6%
- Others: 2.5%

Source: Deloitte Analysis, Bank of Thailand, MOTS, TAT, NESDC

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Thailand’s Tourism Situation

Occupancy rate saw declining in response to entering low season of tourism and termination of We Travel Together phase-five scheme. However, lack of tourism workforce saw easing and numbers of Thai tourists have already exceed pre-COVID level in Southern and Northeastern.

Number of Thai Tourists by region since early 2023 compared to pre-COVID-19

<table>
<thead>
<tr>
<th>Region</th>
<th>Apr-23</th>
<th>May-23</th>
<th>Jun-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>36.4%</td>
<td>45.5%</td>
<td>45.8%</td>
</tr>
<tr>
<td>Eastern</td>
<td>43.9%</td>
<td>51.4%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Southern</td>
<td>47.5%</td>
<td>58.9%</td>
<td>65.8%</td>
</tr>
<tr>
<td>Northern</td>
<td>32.6%</td>
<td>32.3%</td>
<td>29.8%</td>
</tr>
<tr>
<td>Northeast</td>
<td>32.3%</td>
<td>36.4%</td>
<td>29.8%</td>
</tr>
</tbody>
</table>

Source: Deloitte Analysis, Bank of Thailand

Impacts from tourism workforce shortage

- Impact to both service quality and customer capacity: 6% (Apr-23), 4% (May-23)
- Impact to customer capacity but not to service quality: 40% (Apr-23), 29% (May-23)
- Impact to service quality but not to customer capacity: 32% (Apr-23), 46% (May-23)
- No impact: 9% (Apr-23), 8% (May-23)

Unit: % of 110 respondents
Headline inflation peaked at 7.9% in August and will be higher than previously projected for 2023 but will still return to target, around 2-3%, by the end of the year.

Inflation situation in Thailand saw decelerating. Inflation in June 23 = 0.23%

Easing inflation contributed by
- Decelerating increase in energy and food prices
- Recovering domestic demand from tourism sector

Watchlist
- Direction of government economic policies
- Strengthening Thai baht
- Global economies and financial situations

Source: Deloitte Analysis, Bank of Thailand, TPSO, NESDC

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Consumption saw improving, especially in services, align with rising business sentiment.

Durable consumption might further improve from rising motorcycle registration, 13.5% in May 2023 (YoY).

Durable consumption might further improve from rising motorcycle registration, 13.5% in May 2023 (YoY).

**Private Consumption Index (Seasonally Adjusted)**

**Business Sentiment Index – By Occupation**

Above 50 indicates confidence in economic condition

Source: Deloitte Analysis, TDRI, Bank of Thailand

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Thai Industries Sentiment Index had been declined from 95.0 to 92.5 in May 2023.

**Positive Factors**
- Rise in tourism yields to the increase of industrial good demand.
- China’s recovering economy links to positive impacts on export sector

**Negative Factors**
- The continuous drop in Thailand’s exports due to instability of global recovery, exchange rates, and lower demand from trading partners.
- High manufacturing cost and energy price
- Increasing interest rate
- Household debt burden
- The uncertainty of situations after the election

**3-month Forecast watchlist**
- The increase in minimum wage policy
Thai Industries Sentiment Index by Performance

Compared to last month, automotive parts, packaging, and rubble products saw higher in sentiment whilst petrochemical, apparel, and granite & marble saw decline in sentiment.

<table>
<thead>
<tr>
<th>Declined TISI</th>
<th>Increased TISI</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Food &amp; Beverage</td>
<td></td>
</tr>
<tr>
<td>• Renewable energy</td>
<td></td>
</tr>
<tr>
<td>• Petroleum</td>
<td></td>
</tr>
<tr>
<td>• Plastic</td>
<td></td>
</tr>
<tr>
<td>• Aluminum</td>
<td></td>
</tr>
</tbody>
</table>

- Declined TISI but above 100

<table>
<thead>
<tr>
<th>Declined TISI and below 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Textile</td>
</tr>
<tr>
<td>• Apparel</td>
</tr>
<tr>
<td>• Furniture</td>
</tr>
<tr>
<td>• Shoes</td>
</tr>
<tr>
<td>• Jewellery</td>
</tr>
<tr>
<td>• Leather</td>
</tr>
<tr>
<td>• Ceramic</td>
</tr>
<tr>
<td>• Plywood wood</td>
</tr>
<tr>
<td>• Roof and equipment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Increased TISI and above 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Automotive parts</td>
</tr>
<tr>
<td>• Automotive</td>
</tr>
<tr>
<td>• Air conditioner</td>
</tr>
<tr>
<td>• Electricity</td>
</tr>
<tr>
<td>• Pharmaceutical</td>
</tr>
</tbody>
</table>

- Increased TISI but below 100

<table>
<thead>
<tr>
<th>Increased TISI but below 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cement</td>
</tr>
<tr>
<td>• Sawmill</td>
</tr>
<tr>
<td>• Agricultural machine</td>
</tr>
<tr>
<td>• Electronics</td>
</tr>
<tr>
<td>• Alternative medical operation</td>
</tr>
<tr>
<td>• Environment management</td>
</tr>
</tbody>
</table>

Note: As of May 2023
Source: Deloitte Analysis, FTI
The Monetary Policy Committee (MPC) unanimously voted to raise the policy rate by 0.25 percentage point, from 1.75 to 2.00 percent.

The Committee viewed that the Thai economy should continue to expand, driven mainly by tourism and private consumption. Merchandise exports are expected to recover gradually. While headline inflation slows, core inflation remains elevated. Inflationary risks stem from greater demand pressures amid expanding economic activity and higher cost pass-through from supply pressures.

The Committee also views that financial institutions should continue to press ahead with debt restructuring and deems it important to have in place targeted measures and sustainable debt resolution for vulnerable groups.
Thai baht appreciated in response to Federal Reserve chairman’s statement that interest rate increase could slow down. However, the July 23 depreciation was caused by Fed’s recent signal to extra raise interest rate, and the challenges facing the next government.

**Exchange Rate (Unit: THB/USD)**

- Thai baht appreciated
- Depreciated due to Fed’s recent signal to raise interest rate
- Challenges facing the next government

**Factors influencing Thai baht**

- Appreciation:
  - Expected recovery from tourism
  - Foreign demand for Thai stocks
- Depreciation:
  - Fed’s more increases in interest rate in 2023
  - Impact from geopolitical conflicts
  - The uncertainty of situations after the election

**The Change of Currencies against USD (%)**

<table>
<thead>
<tr>
<th>Country</th>
<th>May of 2022 to May of 2023 (YoY)</th>
<th>Jan of 2023 to May of 2023 (YTD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>-0.6</td>
<td>3.1</td>
</tr>
<tr>
<td>China</td>
<td>4.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Japan</td>
<td>6.4</td>
<td>6.4</td>
</tr>
<tr>
<td>Singapore</td>
<td>-3.1</td>
<td>1.1</td>
</tr>
<tr>
<td>South Korea</td>
<td>4.6</td>
<td>6.8</td>
</tr>
<tr>
<td>India</td>
<td>0.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>4.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>

**Source:** Deloitte Analysis, Bank of Thailand, TDRI EIS, NESDC
Household debt remains high at 86.3% to GDP. (90.6% at adjusted rate)

Non-productive loan such as Other personal consumption also significantly contributed to total household debt. Surge in delinquent auto loan also saw concern.

Household Debt to GDP

Trillion THB

- 77.7
- 78.4
- 80.3
- 90.8
- 90.2
- 88.3
- 87.1
- 86.3

%

Source: Deloitte Analysis, TDRI EIS, PIER, National Credit Bureau, Bank of Thailand

2.6 Trillion THB

Auto Loan

Risk to be NPL

190,000
Million THB

NPL

180,000
Million THB

NPL By generation group

GEN Y
350,000
Accounts

GEN X
200,000
Accounts

GEN Y also totals 53% of auto loan new open account for 3 consecutive years (2020-2022).
10 Key Industrial Exports for 4M2023

Majority of industrial exports saw plummeted for 4M2023 except Electric equipment, Automobile, equipment and parts.

### 4M2023 Export Value (mUSD)

<table>
<thead>
<tr>
<th>Export Category</th>
<th>4M2023 Export Value (mUSD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Equipment*</td>
<td>14,074</td>
</tr>
<tr>
<td>Automobile, equipment, and parts</td>
<td>12,464</td>
</tr>
<tr>
<td>Electrical appliance</td>
<td>9,965</td>
</tr>
<tr>
<td>Jewellery and Ornaments</td>
<td>5,540</td>
</tr>
<tr>
<td>Rubber products</td>
<td>4,438</td>
</tr>
<tr>
<td>Plastic material</td>
<td>4,252</td>
</tr>
<tr>
<td>Construction materials</td>
<td>3,420</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>2,703</td>
</tr>
<tr>
<td>Chemical</td>
<td>2,691</td>
</tr>
<tr>
<td>Textile</td>
<td>1,983</td>
</tr>
</tbody>
</table>

### % Change (YoY)

- Electric Equipment*: 0.9%
- Automobile, equipment, and parts: -0.8%
- Electrical appliance: -3.0%
- Jewellery and Ornaments: -16.2%
- Rubber products: -25.1%
- Plastic material: -28.7%
- Construction materials: -16.9%
- Machinery and equipment: -11.5%
- Chemical: -30.4%
- Textile: -14.8%

*Note: Electric equipment comprises circuit board, computer and equipment & parts, Transistor, and other electronics.

Source: Deloitte Analysis, TPSO

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United States, China, and Japan are the top 3 countries for TH’s export. ASEAN area also contributed to about a quarter of total export. However, 4M2023 total export value declined 5.2% (YoY).

### Percentage Contribution

<table>
<thead>
<tr>
<th></th>
<th>4M2023 Percentage Contribution</th>
<th>April 2023 Percentage Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEAN</td>
<td>16.0%</td>
<td>23.2%</td>
</tr>
<tr>
<td>US</td>
<td>8.9%</td>
<td>8.1%</td>
</tr>
<tr>
<td>EU</td>
<td>8.0%</td>
<td>7.4%</td>
</tr>
<tr>
<td>UK</td>
<td>3.8%</td>
<td>3.6%</td>
</tr>
<tr>
<td>CN</td>
<td>12.4%</td>
<td>17.1%</td>
</tr>
<tr>
<td>JP</td>
<td>25.1%</td>
<td>23.8%</td>
</tr>
<tr>
<td>India</td>
<td>1.6%</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>24.1%</td>
<td></td>
</tr>
</tbody>
</table>

**Total Export Value**
- **92,003.3 mUSD**
- **21,723.2 mUSD**

Source: Deloitte Analysis, TPSO

### 4M2023 Percentage Change (YoY)

<table>
<thead>
<tr>
<th>Country</th>
<th>4M2022</th>
<th>4M2023</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>15,504</td>
<td>14,679</td>
<td>-5%</td>
</tr>
<tr>
<td>EU</td>
<td>7,625</td>
<td>7,353</td>
<td>-4%</td>
</tr>
<tr>
<td>CN</td>
<td>11,367</td>
<td>11,436</td>
<td>+1%</td>
</tr>
<tr>
<td>India</td>
<td>3,604</td>
<td>3,462</td>
<td>-4%</td>
</tr>
<tr>
<td>JP</td>
<td>8,394</td>
<td>8,226</td>
<td>-2%</td>
</tr>
<tr>
<td>UK</td>
<td>1,338</td>
<td>1,497</td>
<td>+12%</td>
</tr>
<tr>
<td>Others</td>
<td>24,002</td>
<td>22,212</td>
<td>-7%</td>
</tr>
</tbody>
</table>

**4M2023 Total Export Value**
- **92,003.3 mUSD**
- **84,771.0 mUSD**

**4M2023 Percentage Change (YoY)**
- **-5.2%**
FDI inflow, cumulatively, had been mostly contributed by Manufacturing sector which China also saw to be an investor leader in Thailand.

However, FDI inflow in 2022 was led by Japan. Singapore also saw becoming a major player for Thai market.
Silver Avalanche: Global View
South Korea, Singapore, Thailand and China are facing the biggest silver economy avalanche threat levels

The “SILVER AVALANCHE” Chart of Asia-Pacific in 2030

Source: World Bank, IMF, Monitor Deloitte Analysis
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Uneven Scale of Impact | by Geography

The SILVER CONSUMER SPEND OUTLOOK in 2030

Spend CAGR (of Consumers >50Y, 2018 to 2030)

Source: Monitor Deloitte Analysis; World Bank Population Data; EIU; Euromonitor

Bubble Size = Total USD$ Annual Spend by Consumers >50Y, 2030

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Birth rate and Death rate have crossed before 2020 in Japan and South Korea, whereas Indonesia, New Zealand, and Vietnam are projected to cross after 2050.

**Aged population trend among area**

Source: WorldBank
### Four Segments of the Silver Economy – Market Value and Target Population Size

<table>
<thead>
<tr>
<th>Segment</th>
<th>Digital Fortune in Silver BoP¹</th>
<th>Silver Turns Digital Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The FRUGAL</strong></td>
<td><img src="image1.png" alt="" /></td>
<td><img src="image2.png" alt="" /></td>
</tr>
<tr>
<td>Net Worth²</td>
<td>USD 0.6T</td>
<td>USD 7.6T</td>
</tr>
<tr>
<td>Population Size¹</td>
<td>96M</td>
<td>19M</td>
</tr>
<tr>
<td><strong>The WEALTHY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Worth</td>
<td>USD 1.7T</td>
<td>USD 16.7T</td>
</tr>
<tr>
<td>Population Size</td>
<td>364M</td>
<td>73M</td>
</tr>
</tbody>
</table>

¹Bottom of pyramid
²Monitor Deloitte Analysis: data on the following seven countries has been used to represent Asia excl. Middle-East: China, India, Indonesia, Japan, Korea, Philippines and Singapore

Distribution and wealth of the Wealthy is based on the top 10% and the Frugal is based on the bottom 50% of the elderly population from World Inequality Database (2012-2015), World Economic Forum’s Inclusive Development Index 2018 and Credit Suisse Global Wealth Databook. Distribution of the Technophile and the Tech laggard is based on smartphone penetration data from Pew Research Centre (2018) and info-communications Media Development Authority of Singapore (2017). Distribution of the elderly is based on data from The World Bank Population estimates and projections (2019).
Lack of workforce among companies

In Asia, the declining workforce population has incentivized corporates to hire retired aged population.

Extend working due to high cost of living

During Covid-19, 1/3 of retired 50+ years old in UK returned to work for the financial purpose.

Government raises its retirement age

China, Japan, and South Korea are planning to raise its retirement age gradually and in phases to cope with the country’s rapidly aging population.

Source: Deloitte Analysis, BangkokBizNews, CNBC, Rest Less, Reuters

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Aging, Aged, Super-Aged

Years respectively to move from an *aging* society to an *aged* society

<table>
<thead>
<tr>
<th>Country</th>
<th>Years to Move</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>19</td>
</tr>
<tr>
<td>UK</td>
<td>45</td>
</tr>
<tr>
<td>US</td>
<td>69</td>
</tr>
<tr>
<td>France</td>
<td>115</td>
</tr>
</tbody>
</table>

Unit: Year

Source: UN, Monitor Deloitte Analysis, WorldBank
Silver Avalanche: Thailand
Thailand 2022 elderly data

**2022 Thailand Total Population**
Unit: Million Person

- Aged 60+: 12.7 (19%)
- Below 60: 53.4 (81%)

**2022 Thailand Aged 60+ Population by Gender**
Unit: Million Person

- Male: 7.1 (56%)
- Female: 5.6 (44%)

**2022 Thailand Aged 60+ Population by Range**
Unit: Million Person

- 60-69: 3.7 (29%)
- 70-79: 1.8 (14%)
- 80+: 7.1 (56%)

Source: Department of Older Persons
Significant portion of the Thai silver that have income from their children.

38% of the silver, mostly contributed by female, received income from their children and only 64% of the silver received financial support from their children at home.

### 2021 Thai Silver Income by Source and Gender

<table>
<thead>
<tr>
<th>Source</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work</td>
<td>32%</td>
<td>43%</td>
<td>24%</td>
</tr>
<tr>
<td>Children</td>
<td>32%</td>
<td>25%</td>
<td>38%</td>
</tr>
<tr>
<td>Allowance from government</td>
<td>19%</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>Pension</td>
<td>8%</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Spouse</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Interest from Savings</td>
<td>8%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Others</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Deloitte Analysis, NSO

### 2021 Thai Silver Income Amount from their Children

<table>
<thead>
<tr>
<th>Amount Range</th>
<th>Total</th>
<th>Children at home</th>
<th>Children outside home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1,000</td>
<td>36%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>1,000-4,999</td>
<td>23%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>14%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>10,000-29,999</td>
<td>12%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>30,000-49,999</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>50,000+</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Note: The amounts were accumulated for 1 year before the surveyed date.
37% of TH silver still work and 87% of the workers are non-registered workforce. Agriculture/Fishery and Service/Seller are the most popular jobs for the silver.

2021 Percentage of TH Working Silvers

- Non-working Silvers: 37%
- Working Silvers: 63%

2021 Percentage of TH Registered Working Silvers

- Non-registered: 13%
- Registered: 87%

2021 TH Working Silvers by Occupation

- Agriculture/Fishery: 60.5%
- Service/Seller: 18.2%
- Craftperson: 7.7%
- Janitor/Basic work: 6.5%
- Factory worker (e.g., assemble, controller): 2.7%
- Manager, Senior government officer, Legislator: 2.3%
- Professional worker: 0.9%
- Technician: 0.7%
- Clerk: 0.2%

Source: Deloitte Analysis, NSO
Significant of TH silver work for financial support purpose which majority of silver also work in own business. For those who work to support family business without pay, it is possible that they work due to the in-healthy-status.

### 2021 Thai Working Silver by Reasons to Work

- **Still in Healthy Status**: 47%
- **Need financial support**: 45%
- **No replacement of work candidate**: 5%
- **Others (i.e. support children, in debt, etc.)**: 3%

### 2021 Thai Working Silver by Type

- **Own business**: 65%
- **Support family business without payment**: 19%
- **Government/ Corporate employee**: 13%
- **Employee**: 3%

Source: Deloitte Analysis, NSO
Male silver tend to earn more than female. Early silver also earn the most compared to the older silver.

2021 Thai Working Silver Income per Year by Gender and Group

- **Total**: 6% 8% 5% 8% 4% 3%
- **Male**: 16% 20% 12% 20% 12% 6%
- **Female**: 9% 10% 8% 11% 4% 11%
- **60-69 yrs**: 22% 16% 22% 17% 21% 23%
- **70-79 yrs**: 28% 16% 19% 32% 40% 4%
- **80+**: 9% 8% 10% 7% 11% 14%

Source: Deloitte Analysis, NSO
Thailand 2023 Four Segments of the Silver Economy – Market Value and Target Population Size

The FRUGAL
Digital Fortune in Silver BoP

- Net Worth: THB 4.8B
- Population Size: 670K

The WEALTHY
Silver Turns Digital Gold

- Net Worth: THB 1.2T
- Population Size: 677K

The TECHNOPHILE
Silver Bop as Digital Laggards

- Net Worth: THB 32.6B
- Population Size: 4.5M

The TECH LAGGARD
Silver Turns Gold Sans Digital

- Net Worth: THB 648.7B
- Population Size: 362K

1Bottom of pyramid
2Deloitte Analysis; Distribution and wealth of the Wealthy is based on the top 10% and the Frugal is based on the bottom 50% of the elderly population from World Inequality Database (2021); Distribution of the Technophile and the Tech laggard is based on internet usage in elderly penetration data from NSO (4Q2022) and Mahidol University Research (2021). Distribution of the elderly is based on data from The World Bank Population estimates and projections (2023)
Thailand 2023 Four Segments of the Silver Economy – Market Value and Target Population Size

The FRUGAL
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THB 4.8 B

Silver BoP as Digital Laggards

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Population 4.5M

The WEALTHY
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Population 677K
THB 1.2 T

Silver Turns Gold sans Digital

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Business Trends for Silver

- **Health care**
  - Elderly care (wholly new established or extend service range)

- **Real Estate**
  - Residence/ nursing-home/Silver community

- **Leisure and Self Development**
  - Silver tourism/ Learning/ Craft/ Upskill activities for silver

- **Electronic Devices**
  - Tracking silver/ Medical devices supporting silver

- **Legal Consultation**
  - Living will

- **Financial Product**
  - Reverse Mortgage
  - Insurance

**Legend**
- Health care
- Leisure
- Service

Source: Deloitte Analysis, Bangkok Bank, PIER

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Topical Views
from Our Expert
Why Third Party Risk Management (TPRM)?

A typical SET listed or large organizations may use more than thousands third-parties (i.e. vendors, suppliers, service providers, outsourcers, agents, distributors, etc.) to meet their Business and IT objectives and stay competitive. With companies’ increasing reliance on an interconnected network of third party relationships, their existing risk profiles are further accentuated as the risks of their third parties effectively become their own, particularly in terms of potential reputational damage and vicarious responsibility.

From Deloitte’s latest annual TPRM global survey\(^1\), 46% of organizations surveyed believe the financial impact of a failure by a third-party or subcontractor has at least doubled over the last five years, with a tenfold increase for one in five. In particular, some organizations may struggle with:

- **Lack of confidence or transparency** regarding third party performance and operations.
- **Demand for cost and process efficiencies** as the number of third-parties, and therefore practices to manage them, continue to proliferate.
- **Increased business continuity and resiliency risks** due to importance of third parties to critical processes.
- **Inability to determine third party compliance** with regulations and industry requirements.
- **Limited visibility into subcontractor relationships**, further increasing overall levels of risk.

---

\(^1\) Refers to TPRM global survey 2020” Deloitte Global (2020)

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Typical TPRM Challenges and Risk Landscape

Many organizations still struggle to provide confident and immediate answers to the following questions:

➢ Who are our third parties?
➢ Which relationships are material to our organization?
➢ What controls and governance do we have over our third parties?

This is typically due to:

• TPRM is largely considered to be only the responsibility of the first line of defence, for e.g. basic due diligence during vendor onboarding, particularly for regulated industries.
• Limited scope of risk domains.
• Limited scope of third parties under active management (i.e. contingent workforce, subcontractors and intra-company entities not having any oversight).
• Insufficient governance and oversight on the part of the second and third lines of defence, resulting in limited visibility regarding aggregated third party risk, and the extent of its concentration, at the organizational level.
• Insufficient, incomplete, inconsistent and disparate data spread across multiple systems, as well as a large extent of manual processing.
Deloitte can assist performing both “top-down” and “bottom-up” assessments of an organization’s current state TPRM (e.g., people, process, system/tool), working with relevant stakeholders and applying our market-leading TPRM framework below and related process flows. These can then be tailored into a fit-for-purpose TPRM system for implementation that meets the need of your organization by providing TPRM advisory and assurance services to Three Lines of Defences (Business Units, Risk Management / Compliance, and Internal Audit).

## Examples of our TPRM Services

### Assess:
- Assess client needs and business requirements – match client challenge to our solution/service catalog
- Assess capabilities of existing technology, people, and processes
- Develop an implementation roadmap with the right talent, process, and technology

### Transform/Implement:
- Perform vendor landscape assessment
- Partner with client to define transformational path via implementation, learnings, and continuous assessment

### Operate:
- Identify and measure KPIs and key metrics
- Perform ongoing review and quality checks
Industry Sector Update
Industry Sector Update
Banking
Banking market value in Thailand grew by 0.4% CAGR with a 1% increase 2022 YoY.

**Banking market value**

Unit: THB billion

CAGR 2018-2022

- 2018: 5%
- 2019: 5%
- 2020: 6%
- 2021: 15%
- 2022: 7%

Growth 1Q2022-1Q2023

- 1Q2022: 4%
- 1Q2023: 3%

Source: Deloitte analysis and Bank of Thailand

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Bank loans grew slowly because of large corporate repayment, government and soft loan facility and banks’ loan portfolio management.

**Loan growth classified by loan portfolios and Share of total loans**

Unit: %YoY

<table>
<thead>
<tr>
<th>Year</th>
<th>Corporate</th>
<th>Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>2019</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>2020</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>2021</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>2022</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>1Q2023</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**Share of total loan**

- Corporate: 65%
- Consumer: 35%

Note: Large corporate and SME are excluding financial business.
Source: Deloitte analysis and Bank of Thailand.
Banks’ loans continued to growth, especially in large corporate loans in the financial and trading sectors, mortgage loans, and personal loans.
To navigate through these uncharted waters, banks should reassess traditional product, service, and industry boundaries to create new sources of value. Such opportunities may exist in a number of areas, including embedded finance, tokenized assets, financial technology, digital identity, or green finance. Some banks have begun this journey, but many could fall behind.

The fast pace with which operational risks and regulatory expectations are evolving will require banks to adopt new methods of managing risks, such as transitioning from periodic reviews to continuous monitoring, and limiting the use of third-party data.

Banking saw major drops in total deal volume and value, along with an average deal value decline. Investment management (IM) and wealth management (WM) suffered from falling asset values that dented returns, though WM remains a highly profitable, sought-after specialty.

Five intriguing trends and drivers for 2023: The struggle for customer ownership, Evolving B&CM ownership models, More customized IM and WM products, Increased regulatory scrutiny industrywide, Focus on serving underbanked or debt-averse populations.

Since investment management is talent-driven, most businesses are working to optimize their talent models. Firms are updating their workplace policies to influence employee satisfaction. Progress toward establishing and communicating a corporate purpose is also correlated to improved efficiency, revenue opportunity, and reduced employee turnover.

Firms continue to invest in digital transformation with new technologies that improve the client experience, gain operational efficiencies, and potentially generate alpha. Leadership can help drive these changes effectively with communication to foster collaboration across departments to achieve transformative results.
Industry Sector Update
Insurance
Insurance market increased by 1.0% in 2022 while a 4.2% increase in 1Q2023 YoY is seen.
Total Thai life insurance direct premium increased by +4.01% YoY

Thai life insurance direct premium by type of contract (THB Billion)

- **Rider**: 22%
- **Main**: 78%

THB 150.5 billion in 1Q2023 (+4.01% YoY)

- **Health**:
  - 1Q2022: 26.6 billion
  - 1Q2023: 28.5 billion (+7%)
- **Accident**:
  - 1Q2022: 5.3 billion
  - 1Q2023: 5.5 billion (+3%)

**Note**: Others refer to Annuity, Industrial, Personal Accident and Universal Life

Source: OIC

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Miscellaneous business saw the highest YoY growth at 24% across non-life insurance portfolio mix while marine is the only business with a -7% decline.

Thai non-life Insurance policies by type of contract (Million policies)

Motor

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q2022</td>
<td>11.80</td>
</tr>
<tr>
<td>1Q2023</td>
<td>12.63</td>
</tr>
</tbody>
</table>

Miscellaneous

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q2022</td>
<td>3.96</td>
</tr>
<tr>
<td>1Q2023</td>
<td>4.93</td>
</tr>
</tbody>
</table>

Fire

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q2022</td>
<td>0.54</td>
</tr>
<tr>
<td>1Q2023</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Marine

<table>
<thead>
<tr>
<th>Year</th>
<th>Million Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q2022</td>
<td>0.23</td>
</tr>
<tr>
<td>1Q2023</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Note: Others refer to Other Miscellaneous, Health, Fire and Marine

Source: OIC, EMIS and TGIA

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In setting strategic plans and investment priorities, insurers should strive to maintain the momentum of creative adaptation established over the past few years, accelerating upgrades in systems, talent, and culture while becoming increasingly innovative, and customer-centric.

While technology and resulting improvements in risk selection and pricing are likely to remain the primary drivers of improved bottom-line performance, insurers should expect to be increasingly judged by stakeholders on their response to broader sustainability priorities such as climate risk, diversity and inclusion, social equity, and transparent governance—all of which could become competitive differentiators in the battle for talent, investors, and market share.

From leveraging AI to disrupting conventional claim and underwriting processes, modernizing their legacy landscapes to moving data and infrastructure to the cloud, insurers are on the journey to harness these trends for their business stakeholders and customers.

At present, the insurer can leverage the digital twin to generate quotes, personalized for the customer. Once the customer makes their selection, the insurer can automate and expedite the underwriting process through Subject-Verb Object (SOV) extraction, 3rd party data augmentation, and digital risk fingerprinting.

Collective global efforts to reduce the most extreme of future climate impacts require emissions to decrease substantially in this decade. Many leading insurance regulators are firming up their efforts and exploring ways to make sure coverage is available and affordable.

Managing transition risk while trying to keep underwriting in line with new rules and considerations will be at the forefront of operating in the insurance sector.
Industry Sector Update
Consumer product
During the peak of the pandemic, consumers shifted their spending towards essentials, cutting back on discretionary spending.

**Market size of Apparel and Footwear Specialists (Retail Value, THB million)**

- 2019: 75
- 2020: 57
- 2021: 47
- 2022E: 53
- 2023F: 60
- 2024F: 63

**Market size of Health and Beauty Specialists (Retail Value, THB million)**

- 2019: 173
- 2020: 141
- 2021: 124
- 2022E: 138
- 2023F: 145
- 2024F: 153

**Market size of Home Products Specialists (Retail Value, THB million)**

- 2019: 227
- 2020: 222
- 2021: 232
- 2022E: 262
- 2023F: 268
- 2024F: 277

**Market share by company (Retail value, 2022)**

- **Apparel and Footwear Specialists**:
  - Uniqlo (Thailand): 23%
  - Jaspal: 11%
  - H&M: 10%
  - RSH Thailand: 6%
  - Bata Shoe: 3%
  - Reno Thailand: 1%
  - Minor Corp: 4%
  - Others: 44%

- **Health and Beauty Specialists**: (Note: Market share values provided for demonstration purposes)
  - Ruam Charoen Pattana: 10%
  - Boots Retail: 3%
  - EVEANDBOY: 2%
  - Big C: 2%
  - Sephora: 2%
  - Others: 78%

- **Home Products Specialists**: (Note: Market share values provided for demonstration purposes)
  - DoHome Co Ltd: 12%
  - Central Retail: 11%
  - Central Retail: 11%
  - HomePro: 9%
  - Siam Global House: 2%
  - SB Furniture: 5%
  - Index Living: 2%
  - Ikea: 2%
  - Others: 57%

*Source: Euromonitor*
Food, Beverage and Tobacco

- The percentage of expenditure for Food & Non-Alcoholic beverages in relation to over consumption expenditure has been gradually rising, and spending is likely to remain high over the coming years driven by higher market prices for essential products such as oils, meat, dairy and eggs.

- Spending on alcoholic beverages and tobacco in Thailand has seen a general trend of slowing, and is expected to see weak growth in the coming years.

Source: Euromonitor

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Recommended Deloitte POVs and Key Information – Consumer product

**2023 consumer products industry outlook**

- Deloitte surveyed 150 consumer products executives from an industry proportional mix of food and beverage, household goods, personal care, and apparel companies in November 2022.
- Findings revealed that profitable growth companies are finding ways to get closer to consumers, mainly through more significant digital investment.
- Companies are increasing investment in emerging markets, innovative products, marketing and acquisition. They are transforming their businesses through divestitures and portfolio optimization.
- Profitable growth companies are driving data through supply chains for tracking and traceability, and to help consumers and partners make more informed decisions.

**The rise of digital goods and services: Opportunity over threat**

- Digital offers are evolving at a lightning pace, from health and fitness apps, smart pet accessories, IoT, to AI.
- Digital goods and services represent an estimated 3% of the US consumer’s wallet. As daily life becomes more immersed in the growing value that digital goods and services provide, the consumer’s wallet may be poised to shift.
- Consumer industry companies need to gain understanding of what’s getting digitized in their value chains to fully lean into new opportunities. Forward thinking brands are acquiring new capabilities to offer these digital products and services.

**Green products come of age**

- Expectations of sustainable products are rising, but consumers are likely to reward brands that deliver. Demand for green products is now coming from the mainstream audience.
- Consumer expectations of sustainable products are beginning to mature across a growing number of product categories and are willing to pay a premium of an average 27% for innovative brands that deliver on sustainability promises.
Industry Sector Update
Wholesale, retail and distribution
Wholesales Overview

**Wholesales Index**

<table>
<thead>
<tr>
<th>Year</th>
<th>Index Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>208</td>
</tr>
<tr>
<td>2019</td>
<td>215</td>
</tr>
<tr>
<td>2020</td>
<td>211</td>
</tr>
<tr>
<td>2021</td>
<td>229</td>
</tr>
<tr>
<td>2022</td>
<td>254</td>
</tr>
<tr>
<td>Q1/2023</td>
<td>270</td>
</tr>
</tbody>
</table>

**Non-durable and Durable Goods Index**

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-durable</th>
<th>Durable</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>280</td>
<td>222</td>
</tr>
<tr>
<td>2019</td>
<td>298</td>
<td>232</td>
</tr>
<tr>
<td>2020</td>
<td>295</td>
<td>222</td>
</tr>
<tr>
<td>2021</td>
<td>295</td>
<td>233</td>
</tr>
<tr>
<td>2022</td>
<td>344</td>
<td>237</td>
</tr>
<tr>
<td>Q1/2023</td>
<td>400</td>
<td>240</td>
</tr>
</tbody>
</table>

*Note: Base year 2002 = 100*

*Source: BOT*
Retail Sales Overview

Retail Sales Index

Non-durable and Durable Goods Index

Note: Base year 2002 = 100
Source: BOT

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Economic Outlook Report Mid-Year 2023 64
Buyers choose to shop through e-Marketplace while sellers select to sell through social commerce like Facebook.

### Purchasing and Selling channels

<table>
<thead>
<tr>
<th>Channel</th>
<th>Buyer</th>
<th>Seller</th>
</tr>
</thead>
<tbody>
<tr>
<td>eMarketplace</td>
<td>55.2%</td>
<td>76.0%</td>
</tr>
<tr>
<td>Facebook</td>
<td>61.5%</td>
<td>66.8%</td>
</tr>
<tr>
<td>Instagram</td>
<td>13.0%</td>
<td>19.9%</td>
</tr>
<tr>
<td>LINE</td>
<td>31.0%</td>
<td>32.1%</td>
</tr>
<tr>
<td>Twitter</td>
<td>3.8%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Website/App</td>
<td>26.7%</td>
<td>39.7%</td>
</tr>
</tbody>
</table>

Source: Etda (as of 2022)

### Reason to purchase

<table>
<thead>
<tr>
<th>Reason to purchase</th>
<th>Buyer</th>
<th>Seller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low price of products</td>
<td>63.1%</td>
<td></td>
</tr>
<tr>
<td>Product variety</td>
<td>58.7%</td>
<td></td>
</tr>
<tr>
<td>Easy of platform usage</td>
<td>45.8%</td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>44.4%</td>
<td></td>
</tr>
<tr>
<td>Low shipping fees</td>
<td>34.1%</td>
<td></td>
</tr>
</tbody>
</table>

### Payment Channel

<table>
<thead>
<tr>
<th>Payment Channel</th>
<th>Buyer</th>
<th>Seller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website/Mobile banking</td>
<td>67.3%</td>
<td></td>
</tr>
<tr>
<td>Cash on Delivery</td>
<td>58.5%</td>
<td></td>
</tr>
<tr>
<td>e-Wallet</td>
<td>24.4%</td>
<td></td>
</tr>
<tr>
<td>Credit card</td>
<td>17.1%</td>
<td></td>
</tr>
<tr>
<td>Online payment (e.g. PayPal, Google pay)</td>
<td>15.5%</td>
<td></td>
</tr>
</tbody>
</table>
Recommended Deloitte POVs and Key Information – Wholesale, retail and distribution

Article

2023 retail industry outlook

Retailers’ role in the consumer journey has changed. The pandemic accelerated a trend already in motion: Consumers expect the best price in the most convenient way possible. To compete, retailers have rolled out the actual and virtual red carpet, offering fast last mile services like curbside pickup and same-day delivery, personal shoppers, fit predicting tools, and payment plans.

There are three key areas that retailers can—and should—consider now to help create efficiencies while addressing the changing consumer: last-mile capabilities, reverse logistics, and social commerce.

Key Information

• Retailers’ role in the consumer journey has changed. The pandemic accelerated a trend already in motion: Consumers expect the best price in the most convenient way possible. To compete, retailers have rolled out the actual and virtual red carpet, offering fast last mile services like curbside pickup and same-day delivery, personal shoppers, fit predicting tools, and payment plans.
• There are three key areas that retailers can—and should—consider now to help create efficiencies while addressing the changing consumer: last-mile capabilities, reverse logistics, and social commerce.

M&A in retail

Macroeconomic trends driving buy-side and sell-side M&A in retail
• In addition to “buy”, “partner”, or “sell”, margin improvement can be a step in the journey to help retailers shift into a growth-oriented mindset and free cash flow for re-investment.
• To emerge as a leader through a period of disruption and opportunity, retailers must evaluate how M&A strategy fits into their value proposition and long-term strategic goals.

The Future of retail

• How should retailers prepare to serve vaccinated customers as they return to stores— and what are the implications?
• To prepare for the future of shopping, retailers must reimagine how to create a holistic, tailored shopping experience, enabling customer-centric journey touchpoints.
• Accelerated changes in consumer behaviors have forced retailers to rethink, invest in, and strengthen their innovation and R&D capabilities for the future.
Industry Sector Update
Automotive
Key Figure Update: Automotive (as of April 2023)

Motor vehicle manufacturing

- **Industrial production index**
  - Jan-22: 116
  - Jul-22: 75

- **Finished goods inventory index**
  - Jan-22: 208
  - Jul-22: 191

- **Utilization rate**
  - Jan-22: 86
  - Jul-22: 56

- **Labor index**
  - Jan-22: 84
  - Jul-22: 61

**Note:** Based year 2016

**Source:** FIT

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In 2023, the number of automotive production is expected to improve to 1.94 million unit with the semiconductor shortage begins to subside.

![Number of Automotive Production Chart]

**Source:** Yuanta Research and Deloitte Analyses

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In the first 2 months of 2023, sales of commercial cars, especially four-wheel drive (-22.4% YoY) one-ton pick up (-18.0% YoY), 2-4 tons trucks (-15.7% YoY) and trucks over 4 tons and bus (-16.3% YoY), decreased in contrast to the improvement of passenger cars.
New vehicle sales YoY decrease in April can be seen for both passenger and commercial cars

Source: Toyota Motor Thailand Co., Ltd. (TMT)

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### Thailand’s BEV situation

Number of newly registered BEVs in April 2023 already surpassed that of full year 2022 sales

#### Thai BEV registration (as of 31 April 2023)

<table>
<thead>
<tr>
<th>Year</th>
<th>New Registered</th>
<th>Accumulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1,572</td>
<td>2,854</td>
</tr>
<tr>
<td>2020</td>
<td>2,999</td>
<td>5,685</td>
</tr>
<tr>
<td>2021</td>
<td>5,781</td>
<td>11,382</td>
</tr>
<tr>
<td>2022</td>
<td>20,816</td>
<td>32,081</td>
</tr>
<tr>
<td>Apr-23</td>
<td>26,235</td>
<td>58,232</td>
</tr>
</tbody>
</table>

**Source:** EVAT

#### BEV by type (Accumulated)

- **Motorcycle**
  - Jul-20: 600
  - Jul-23: 1,915
- **Car**
  - Jul-20: 23,375
  - Jul-23: 32,263
- **Bus**
  - Jul-20: 79
  - Jul-23: 600
- **Tuk Tuk**
  - Jan-20: 600
  - Jul-23: 79
- **Truck**
  - Jul-20: 79
  - Jul-23: 600

**1,212 Charging Stations**

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Recommended Deloitte POVs and Key Information – Automotive

**Article**

2023 Global Automotive Consumer Study

**Key Information**

- Consumer interest in EVs is growing as consumers, pressured by hyper-inflationary conditions, look to lower their operating costs. However, individual markets face different challenges to maintain forward momentum. Affordability, range anxiety, and battery safety concerns remain as significant barriers to adoption.

- Product quality still tops the list of factors driving consumer decisions when it comes to which vehicle brand to buy, but expectations regarding the acceptable length of time to wait for delivery may be starting to stretch out as a lasting by-product of the inventory crisis, potentially opening the door to a new “build-to-order” paradigm.

- When asked who they trust most, Southeast Asia consumers point to the relationship they have with either their selling or servicing dealer, signaling the important role that dealers play in the regional automotive value chain – particularly in the conversation around direct-to-consumer sales.

- Consumers in Southeast Asia are willing to share their data for connected vehicle features, but most would rather pay for them as part of the upfront cost of the vehicle or on a per use basis, instead of a subscription.

- The evolution of automotive mobility is expected to continue to accelerate and be influenced by many factors. To capture these important effects, an extensive automotive mobility value chain model that is structured along the asset and customer life cycle is to be explored.

- In recent years, the ways that vehicles are sold and used by customers are changing rapidly.

- By 2023, the captives’ market and other mobility providers are expected to grow by 34% in EUROPE5 and 21% in the US.

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Manufacturing Production Index

Manufacturing PMI (Index) in 2021-June 2023

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
<th>Average Jan-May 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>Avg</td>
<td>96</td>
<td></td>
</tr>
</tbody>
</table>

Source: BOT

Manufacturing PMI (Index) by Sector in 2021-June 2023

- Manufacture of rubber and plastics products
- Manufacture of other non-metallic mineral products
- Manufacture of basic metals
- Manufacture of fabricated metal products, except machinery and equipment

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Capacity Utilization of Certain Industries

Capacity Utilization of Certain Industries in 2021-June 2023

- 2021: 63
- 2022: 63
- Avg Jan-May 2023: 61
- Total Index: 63

Capacity Utilization of Certain Industries by Sector in 2021-June 2023

- Manufacture of other non-metallic mineral products: 61, 61, 59, 59, 46, 50, 52
- Manufacture of basic metals: 53, 51, 53, 51, 47, 47, 47
- Manufacture of fabricated metal products, except machinery and equipment: 63, 61, 61, 61, 43

Source: BOT
Recommended Deloitte POVs and Key Information – Industrial Product & Construction

**Article**

**2023 manufacturing industry outlook**

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**2023 engineering and construction industry outlook**

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**Tracking the trends 2023**

The indispensable role of mining and metals

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**Key Information**

- Companies with higher digital maturity have shown greater resilience, as did those that accelerated digitalization during the pandemic.
- Addressing the tight labor market and workforce churn amid shifting talent models is expected to remain a top priority for most manufacturers in 2023.
- Deloitte’s recent supply chain research highlights that 80% of surveyed manufacturing executives have experienced a “heavy” to “very heavy” impact of disruption on their supply chains over the past 12 to 18 months.

- Industry segments experience different growth trajectories and increased competition
- Increased lead times and volatile material costs pressure margins
- Talent pressures and shifting talent models lead the industry to rethink workforce strategies
- Developers and contractors further invest in emerging technologies to drive efficiencies
- Industry evaluates new practices to deliver positive societal impacts

- The notion of circularity is being adopted in the energy space with mine electrification and energy storage, and companies have been regenerating landscapes for some time. However, these initiatives are mainly driven by liability, regulation and resource scarcity, rather than by value creation.
- Rethinking the flow of value throughout the metals and minerals ecosystem is one of the biggest opportunities this sector has to positively influence sustainable development.
Industry Sector Update
Power, Utilities & Renewables
The state-owned Electricity Generating Authority of Thailand (EGAT) and Independent Power Producers (IPPs) dominate electricity generation in Thailand with a combined market share of 68% as of April 2023.

**System Generating Capacity**

**Total 49,469 MW**

As of April 2023

Source: EPPO

<table>
<thead>
<tr>
<th>Source</th>
<th>EGAT</th>
<th>IPP</th>
<th>SPP</th>
<th>Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW</td>
<td>16,920</td>
<td>17,024</td>
<td>9,290</td>
<td>6,235</td>
</tr>
<tr>
<td>%</td>
<td>(34%)</td>
<td>(34%)</td>
<td>(19%)</td>
<td>(13%)</td>
</tr>
</tbody>
</table>
Electricity consumption among residential and industrial declined due to the increase in Ft retail (Jan-Apr 2023) combined with the decline in Manufacturing Production Index. However, that of business area saw rising from recovering tourism and service activities.

**Electricity Consumption Classified by Sector (Jan-Apr 23)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Electricity Consumption (GWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>25%</td>
</tr>
<tr>
<td>Business</td>
<td>28%</td>
</tr>
<tr>
<td>Industrial</td>
<td>45%</td>
</tr>
<tr>
<td>Others</td>
<td>3%</td>
</tr>
</tbody>
</table>

64,258 GWh

Source: Deloitte Analysis, EPPO

Note: Others = Agriculture, Government and Non-Profit and others
Recommended Deloitte POVs and Key Information – Power, Utilities & Renewables

**Key Information**

- Utilities increasingly plan to roll out the next wave of advanced metering infrastructure (AMI)
- Environmental, social, and governance reporting continues to gain momentum
- Battery storage deployments set to accelerate despite supply chain snags
- Power and utility companies see opportunities to reap value from clean hydrogen
- Utilities likely to sharpen focus on preparing for electric vehicle growth

- Drivers for 2023 renewable growth are some of the strongest the industry has seen, including competitive costs, supportive policies, and burgeoning demand.
- Due to these headwinds, renewable energy costs could continue to rise in the short term before they return to the more than decade-long decline driven by increasing scale and technological advances. But wind and solar are still the cheapest energy sources for power generation in most areas, and that gap is widening.

- To have enough edge computing power with access to the raw data allowing for high-resolution waveform data, edge computing, and flexible networking capabilities along with more secure over-the-air updates.
- Real-time, dynamic energy data could allow customers to analyze their device-level usage when costs are higher or incentives for reduced demand are provided to pinpoint device-level consumption, allowing utilities to target flexible grid loads.
Industry Sector Update
Energy & Chemical
Every petroleum products deceased in the first four months of 2023 except jet fuel and gasoline

Consumption of petroleum products 4M2023

Unit: %

9,339.6 million liters in 4M2023

Diesel: 51%
Jet Fuel: 9%
LPG: 16%
Gasoline: 15%
Fuel oil: 9%

Source: Deloitte Analysis, EPPO

Growth rate YoY

Jet Fuel: -67%
Fuel oil: 60%
LPG: 74%
Gasoline: 10%
Diesel: 8%
Consumption of natural gas increased in the first four months of 2023 YoY

### Consumption of Natural Gas by Sector

<table>
<thead>
<tr>
<th>Year</th>
<th>NGV</th>
<th>Industry</th>
<th>GSP</th>
<th>Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>4,781</td>
<td>4,368</td>
<td>4,394</td>
<td>4,143</td>
</tr>
<tr>
<td>2020</td>
<td>4,368</td>
<td>4,394</td>
<td>4,143</td>
<td>4,143</td>
</tr>
<tr>
<td>2021</td>
<td>4,394</td>
<td>4,143</td>
<td>4,143</td>
<td>4,143</td>
</tr>
<tr>
<td>2022</td>
<td>4,143</td>
<td>4,143</td>
<td>4,143</td>
<td>4,143</td>
</tr>
</tbody>
</table>

**CAGR 2019-2022**
- NGV: -15%
- Industry: +1%
- GSP: -8%
- Electricity: -4%

**CAGR 4M2022-4M2023**
- NGV: -6%
- Industry: +1%
- GSP: +15%
- Electricity: +2%

**Source:** Deloitte Analysis, EPPO

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Economic Outlook Report Mid-Year 2023
LPG, Propane, and Butane supply and demand similarly rebounded in 2022

Unit: Thousand Tons

<table>
<thead>
<tr>
<th>Year</th>
<th>Supply (Thousand Tons)</th>
<th>Demand (Thousand Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>6,929</td>
<td>7,005</td>
</tr>
<tr>
<td>2019</td>
<td>6,530</td>
<td>6,859</td>
</tr>
<tr>
<td>2020</td>
<td>6,030</td>
<td>5,973</td>
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<tr>
<td>2021</td>
<td>6,221</td>
<td>6,286</td>
</tr>
<tr>
<td>2022</td>
<td>6,672</td>
<td>6,630</td>
</tr>
<tr>
<td>4M2022</td>
<td>2,309</td>
<td>2,228</td>
</tr>
<tr>
<td>4M2023</td>
<td>2,175</td>
<td>2,159</td>
</tr>
</tbody>
</table>

Source: EPPO
Article

2023 oil and gas industry outlook

2023 chemical industry outlook

Global chemical industry mergers and acquisitions outlook 2023

Key Information

• Drivers for 2023 renewable growth are some of the strongest the industry has seen, including competitive costs, supportive policies, and burgeoning demand.

• Due to these headwinds, renewable energy costs could continue to rise in the short term before they return to the more than decade-long decline driven by increasing scale and technological advances. But wind and solar are still the cheapest energy sources for power generation in most areas, and that gap is widening.

• Portfolio cleanup will continue—some will be limited based on macro challenges, and some companies with balance sheet strength may see opportunistic deals. The M&A environment is transforming from physical and business assets to new growth areas with sustainable technologies and services.

• Digital technology is being viewed as a strategic discipline, which can create value through treating emerging technologies as a risk-adjusted portfolio. This approach can drive further value chain improvements and enable a more sustainable chemical industry.

• Despite the aforementioned M&A headwinds, 90% of the chemical executives surveyed were still bullish that they were at least somewhat likely to undertake a merger or acquisition in 2023.

• For the third year in a row, organic growth was selected as the top focus area over the next 12 months, with 17 respondents ranking it as their top priority and 29 respondents ranking it among their top four priorities for 2023.
Industry Sector Update
Life Sciences and Healthcare
Thai Medical Device Export and Import

**Thailand Export 4M2023**

- **Single-use device**: 37,759 (87.4%)
- **Reagent and test kit**: 801 (2.1%)
- **Durable medical device**: 3,950 (10.5%)

**Thailand Import 4M2023**

- **Single-use device**: 30,278 (45.2%)
- **Reagent and test kit**: 6,311 (20.8%)
- **Durable medical device**: 10,276 (33.9%)

**Unit**: Million THB

*Source: Medical Device Intelligence Unit (MeDIU)*
Pharmaceutical Overview

Increasing pharmaceutical sales account from implementation of universal health insurance and growing number of medicines distribution through hospital

Pharmaceutical sales

Unit: Billion THB

Original and generic drug expected to see continuous annual sales uplifts due to therapeutic area such as chronic diseases and government support respectively

Domestic Original drug/patented sales

Unit: Billion THB

Domestic Generic drug sales

Unit: Billion THB

Source: Fitch Solutions and Krungsri research

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Thailand is heavily dependent on imports, largely reflecting the lack of domestic manufacturers and local preference for patented medicines, many of which can only be imported from abroad. Exports will increase due to high demand for generic medicines in both regional and global markets.

**Pharmaceutical Imports**

- **2020**: 72,860
- **2021**: 84,072
- **2022E**: 96,144
- **2023F**: 109,710
- **2024F**: 123,677
- **2025F**: 140,445
- **2026F**: 160,771

**Pharmaceutical Export**

- **2020**: 14,091
- **2021**: 14,428
- **2022E**: 14,969
- **2023F**: 15,548
- **2024F**: 16,241
- **2025F**: 17,102
- **2026F**: 18,170

**Source:** Fitch Solution

Unit: Billion THB
**Recommended Deloitte POVs and Key Information – Life Sciences and Healthcare**

**Article**

**2023 Global Life Sciences Outlook**

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**2023 Global Health Care outlook**

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**Integrating digital health tools to help improve the whole consumer experience**

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**Key Information**

- R&D innovation is one of the top actions that 91% of life sciences organizations plan to invest in more heavily during 2023, according to a Deloitte survey of 60 senior life sciences executives from biopharmaceutical and medical device manufacturers with revenue of more than US$500 million.

- Life sciences companies that focus on high-value, relationship-driven investments in their people create more resilient supply chains.

- Health care providers, other sector participants, governments, and regulators must ask themselves how they can:
  - Translate lessons about virtual health delivery during the pandemic into improved access and treatment.
  - Leverage technology to reduce costs and demands on health workers while improving care for patients.
  - Reduce their carbon footprint and thereby help to mitigate some of the environmental threats to public health.

- Heath systems are increasingly adopting digital technologies to better meet consumers’ health and well-being needs.

- Health systems’ digital offerings may not be adequately meeting consumers’ needs outside of their facilities.

- Health systems consider realigning business models, managing workforce, and improving workflows – they keys to better integrating digital technologies that meet consumer needs.
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