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Research

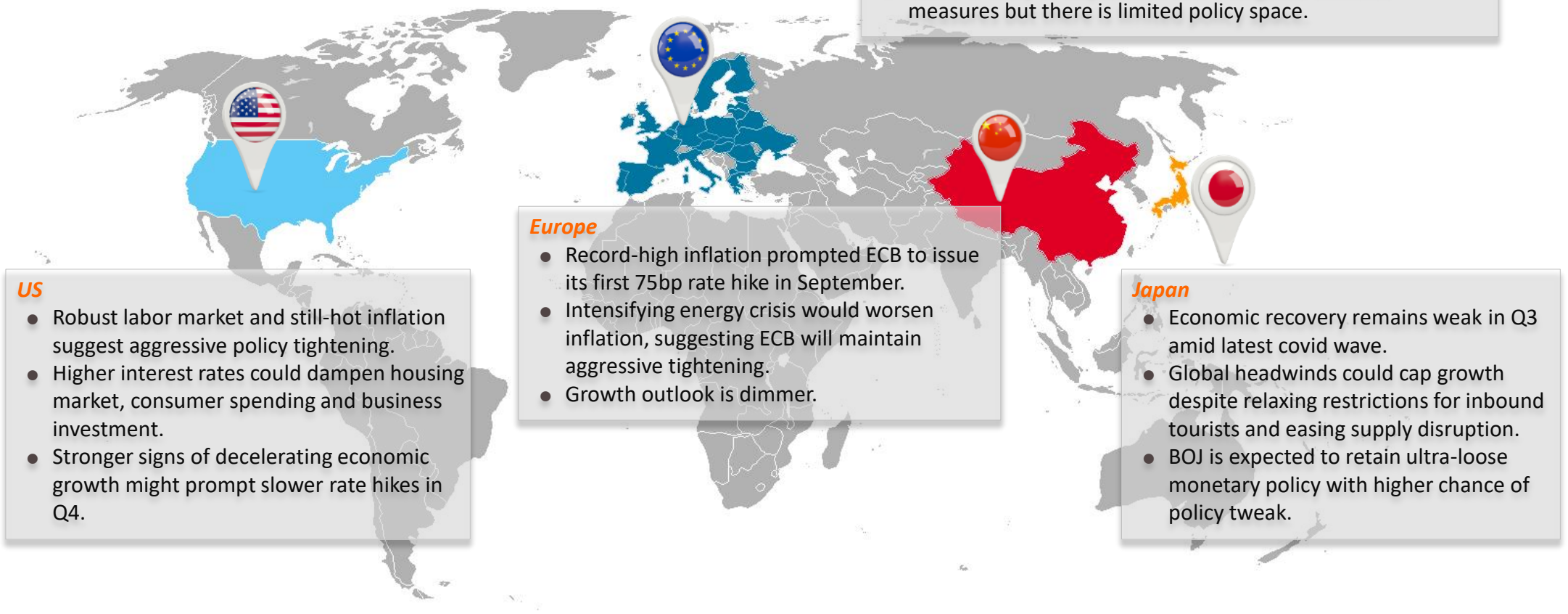
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MONTHLY ECONOMIC BULLETIN

September 2022

Krungsri Research

Global: Bracing for higher interest rates



China

- Economy experienced some gains from stimulus measures.
- Recovery remains fragile due to weaker global demand and possibly renewed restrictions in some cities.
- China is likely to implement more targeted stimulus measures but there is limited policy space.

US

- Robust labor market and still-hot inflation suggest aggressive policy tightening.
- Higher interest rates could dampen housing market, consumer spending and business investment.
- Stronger signs of decelerating economic growth might prompt slower rate hikes in Q4.

Europe

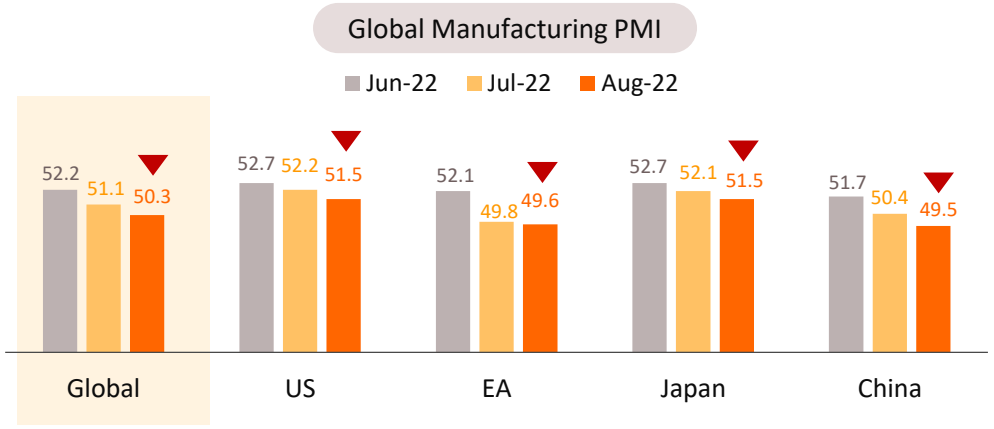
- Record-high inflation prompted ECB to issue its first 75bp rate hike in September.
- Intensifying energy crisis would worsen inflation, suggesting ECB will maintain aggressive tightening.
- Growth outlook is dimmer.

Japan

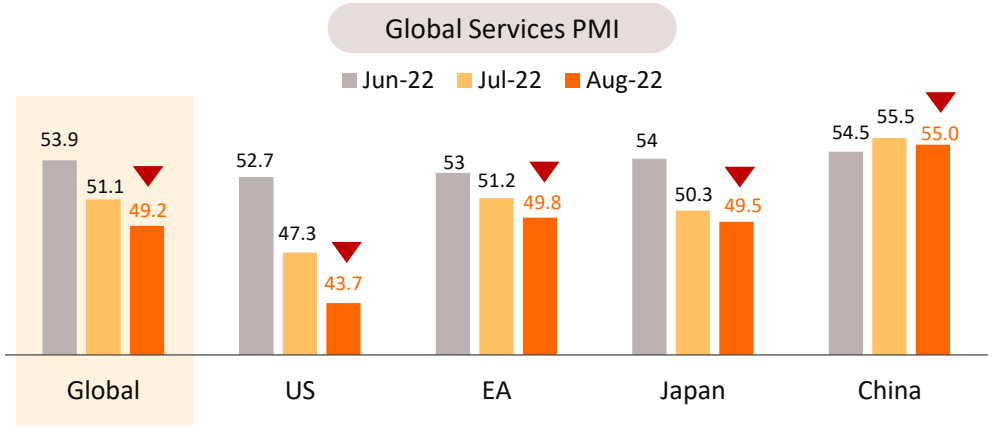
- Economic recovery remains weak in Q3 amid latest covid wave.
- Global headwinds could cap growth despite relaxing restrictions for inbound tourists and easing supply disruption.
- BOJ is expected to retain ultra-loose monetary policy with higher chance of policy tweak.

Global manufacturing activity posts slowest growth in 2 years; production could drop in coming months; high inflation points to further rate hikes

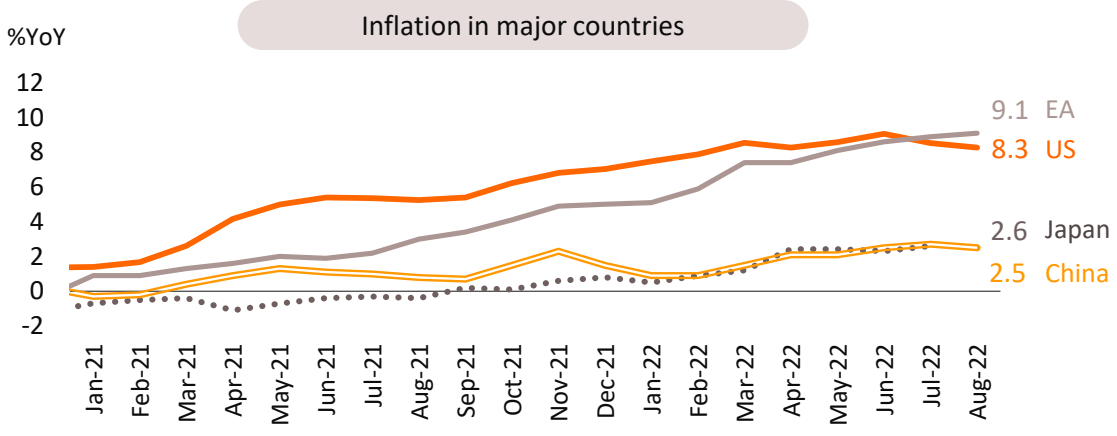
August Global Manufacturing PMI is at its lowest since June 2020; slower growth of new orders and rising inventory level point to weaker production



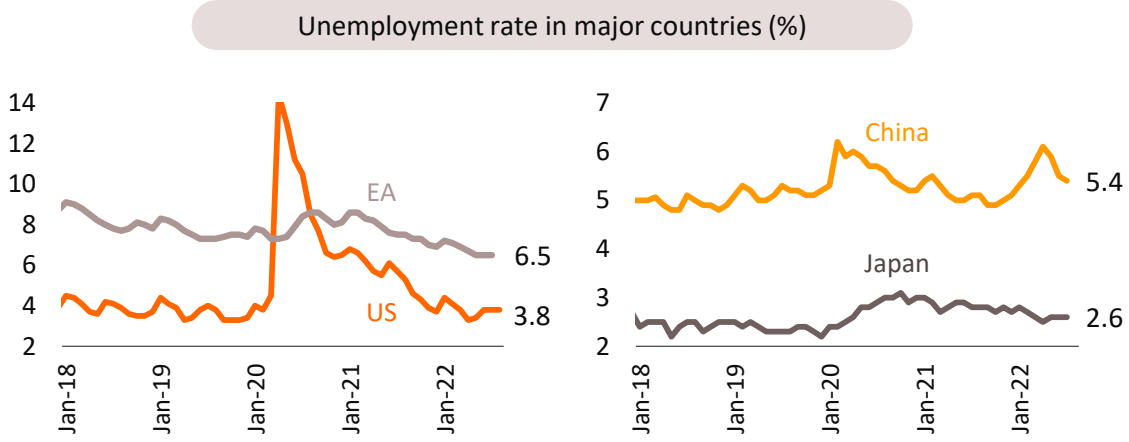
Global Services PMI contracted in August, the first contraction since June 2020 and is below Manufacturing PMI for the first time since January



Inflation in key countries remained uncomfortably high despite a decline in global oil prices; inflation in China has softened on weaker demand



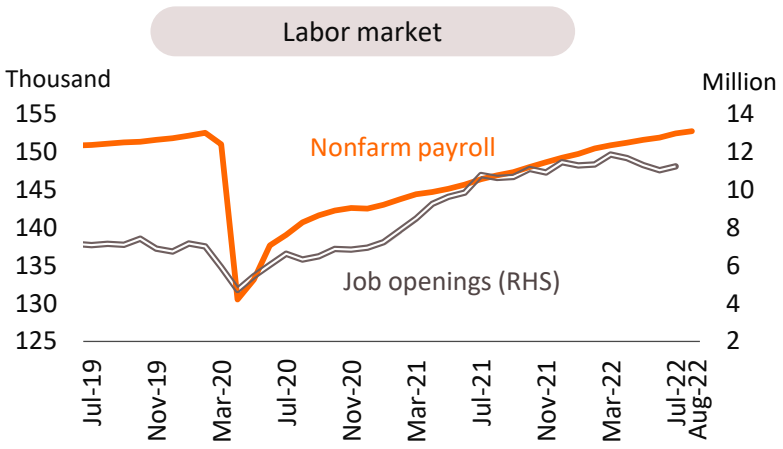
High inflation and robust labor market in western countries suggest central banks would continue to raise interest rates to tame inflation



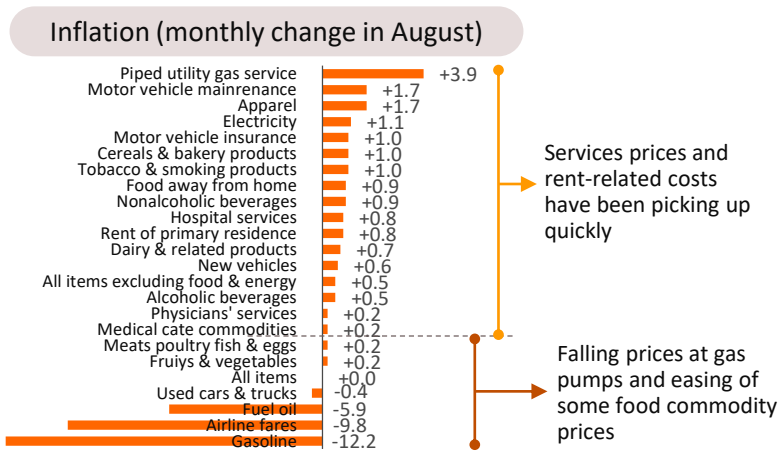
Source: Markit Economics, Bloomberg, CEIC, Krungsri Research

US: Robust labor market and still-hot inflation suggest aggressive policy tightening; stronger signs of decelerating economic growth might prompt slower rate hikes in Q4

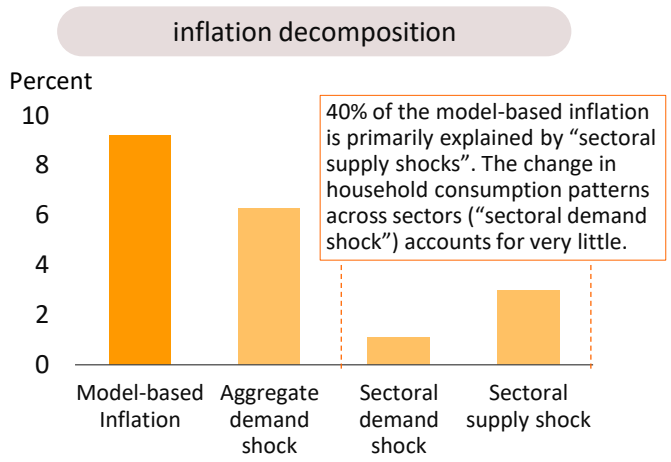
Non-farm employment has reached 240k, higher than pre-Covid level in Feb 2020; job openings have risen



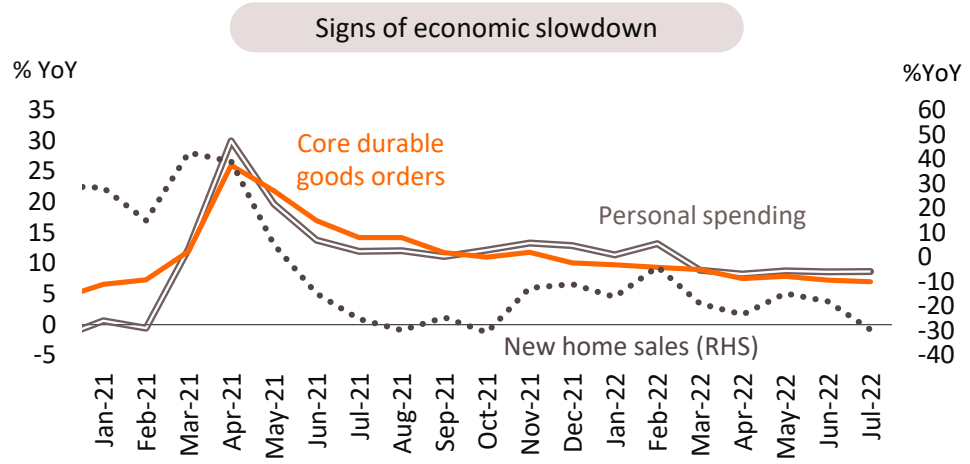
The slower price increases have not yet become widespread and more pronounced



Supply constraints magnified inflation; easing supply bottlenecks could trigger a sharp drop in inflation



Higher interest rates could dampen housing market, consumer spending and business investment



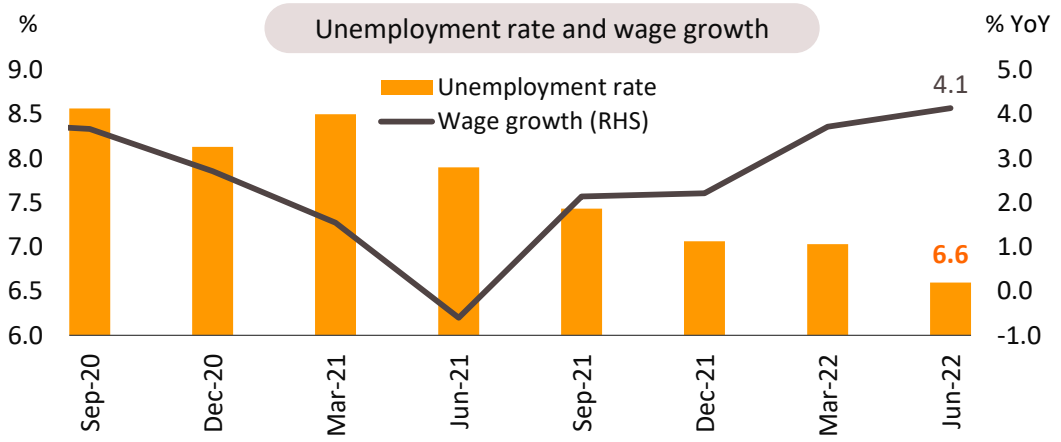
Source: Bureau of Labor Statistics (BLS), The New York Times, New York Fed, Federal Reserve, Bloomberg, Krungsri Research

Aggressive monetary tightening to continue in September, but possibly less restrictive from October given recent policy moves, slower growth, and easing inflation

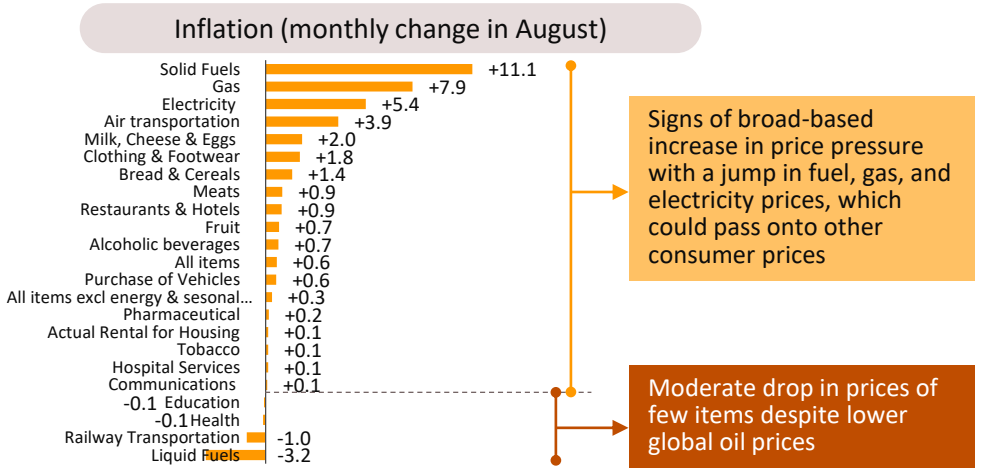
Our views	Fed officials' comments, forward guidance, and key evidence
Powell's hawkish stance	• Powell said the Fed is "strongly committed" to fighting inflation and cautioned strongly against prematurely loosening policy. The Fed's focus is broader than a month or two of data and it will continue to push ahead **until inflation moves down closer to its 2% target.** • Other Fed officials also vowed to continue to rein in inflation.
Big rate hike is expected in September	• **Persistent tightness in labor market:** Average hourly earnings increased by 5.2% YoY in August, same as in July. Job openings posted the first increase after three consecutive months of mild declines. • **Still-hot inflation:** Core CPI accelerated to 6.3% in August from 5.9% in July. CPI rose stronger than expected, by 8.3%, close to July's 8.5%.
Signs of slower pace of rate hikes in Q4	• **Further signs of slowing economic growth:** Impact of interest rate hikes would dampen personal spending, business investment, and housing market. • **Easing supply disruption** could trigger a sharp drop in inflation. Inflation could drop to 6% without supply bottlenecks, from 9%, according to the New York Fed. • **Financial conditions would tighten** given further policy moves, including reaching beyond the neutral rate and larger scale of Quantitative Tightening (QT).

Eurozone: Intensifying energy crisis is pushing up inflation, which might prompt further aggressive monetary tightening; growth outlook is dimmer

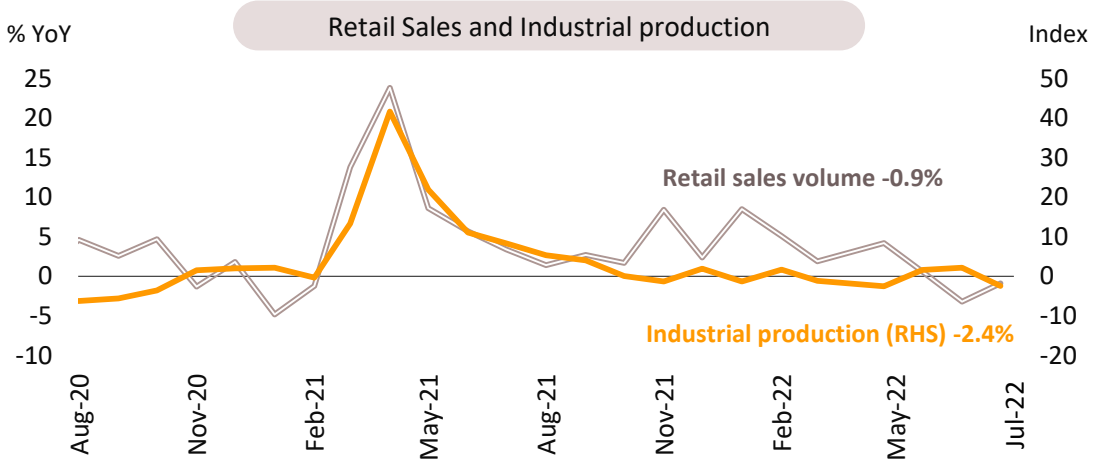
Eurozone unemployment rate is hovering near record low and wages are rising, fueling inflationary pressure



Inflation reached a new high of 9.1% in August; intensifying energy crisis could push up inflation past 10% soon



Monetary tightening threatens Eurozone economic growth, already being pressured by the energy crisis; retail sales and industrial production contracted



Source: EuroStat, ECB, BBC, Bloomberg, Krungsri Research

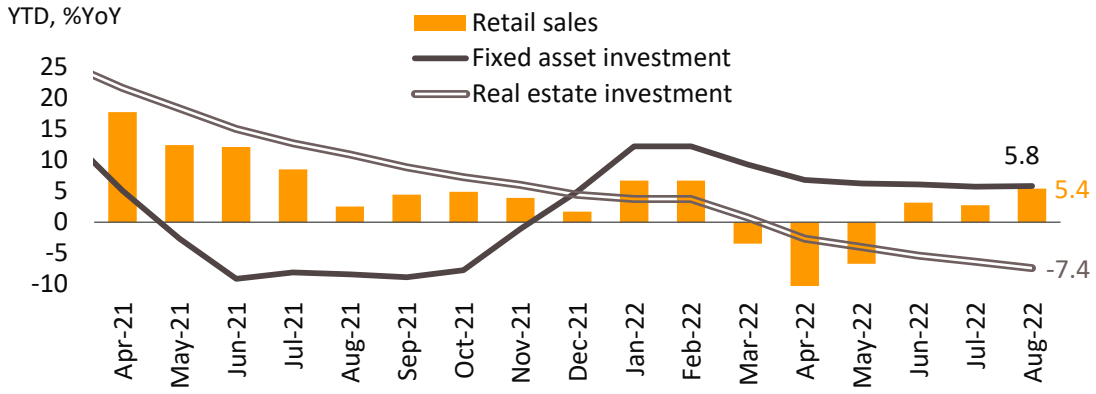
Record-high inflation prompted ECB to issue its first 75bp rate hike in September; ECB might maintain aggressive monetary tightening to rein-in inflation

Our views	Highlights of ECB meeting on 8 September and key issues
Unprecedented rate hike in September	• **The ECB raised interest rates by an unprecedented 75bps at its September meeting** following a 50bp rate hike in July, meeting market expectations. • Main refinancing rate rose to 1.25%, marginal lending facility rate to 1.5% and deposit facility one to 0.75%.
Signs of further aggressive rate hikes	• ECB President Lagarde said the current rate was ***"far away from the rate that will help us return inflation to 2%"***. *"We expect to raise interest rates further, because inflation remains far too high and is likely to stay above our target for an extended period".* • Inflation in the Euro Area reached **a new high of 9.1%** in August. **Intensifying energy crisis could push up** Inflation past 10% soon. Russia has halted gas supply by cutting off flows from Nord Stream 1 pipeline. Nearly two-thirds of Europe is experiencing drought conditions this year – **the worst dry spell in 500 years.** The heatwave has knock-on effects on Europe's food supply, commerce, water access and energy systems. • The ECB has **raised inflation projections significantly to 8.1% for 2022** and 5.5% for 2023, and trimmed growth to 3.1% and 0.9%, respectively.

China: Some gains from stimulus measures but recovery remains fragile due to weaker global demand and possibly renewed restrictions in some cities under zero-Covid policy

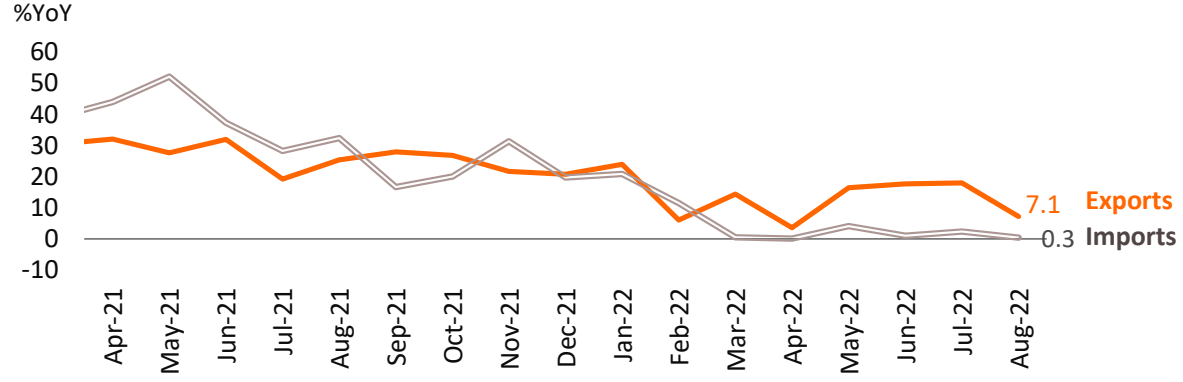
Retail sales growth was partly backed by low-base effect; investment improved slightly; struggling property market raises concerns over ripple effect

Retail sales, fixed asset investment and real estate investment



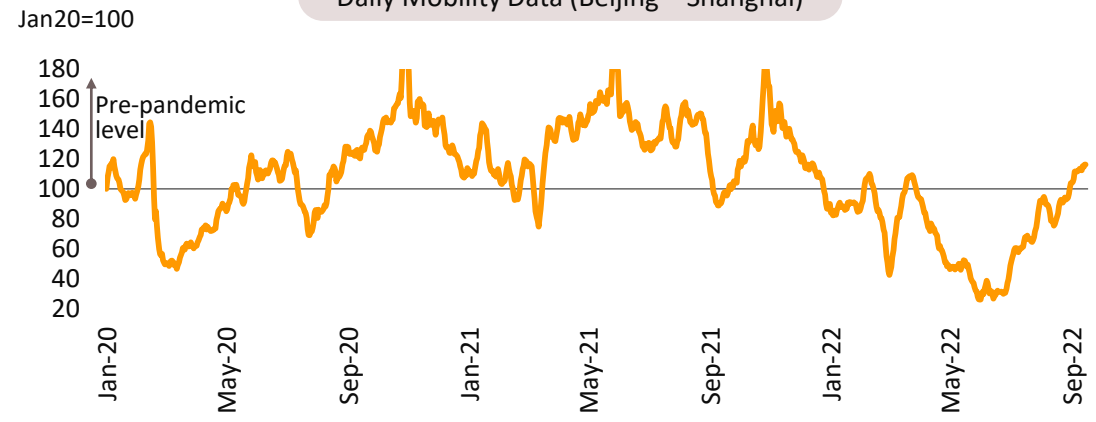
Export growth decelerated sharply to 7.1% YoY in August; imports rose just 0.3%, indicating weaker external and domestic demand

Chinese exports and imports



Mobility is recovering but remains weak; Chengdu exited a 2-week lockdown on Sep 15; zero-Covid policy will continue to pressure economic activity

Daily Mobility Data (Beijing – Shanghai)



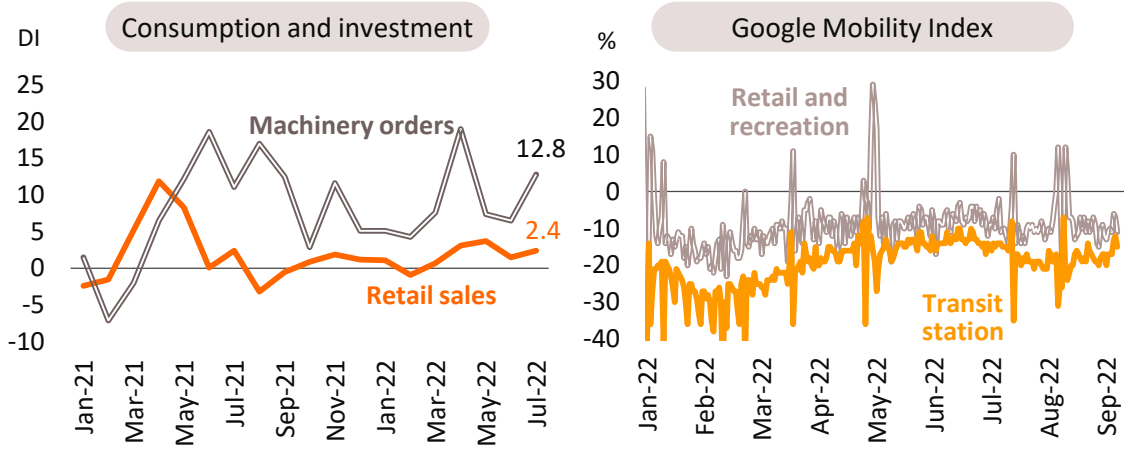
Global economic slowdown and weak domestic demand could prompt China to implement more targeted stimulus measures but there is limited policy space

Our views	Recent policy moves and room for further stimulus measures
Recent stimulus measures and more to come	• **Easing consumer and producer price inflation gives policy makers room to ease monetary policy.** Consumer Price Index (CPI) rose 2.5% YoY in August, down from 2.7% in July. **Core CPI was steady at only 0.8%.** Producer Price Index (PPI) slowed substantially to 2.3% from 4.2% in July. • **Recent stimulus measures: (i) PBOC trimmed key interest rates by 5-15 bps in August; (ii) a further 1 trn yuan of funding,** including 300bn yuan for infrastructure spending and investment, 200bn for bonds to be issued by state-owned power generation companies, and 500bn yuan of special bonds for local governments; **(iii) 200 bn yuan special loans for property developers** to complete delayed and stalled projects.
Limited policy space for more stimulus measures	• Despite benign inflation**, a weaker yuan is complicating policy actions and limiting policy easing.** The yuan has lost nearly 10% against the US dollar this year, crossing the 7-level for the first time in over 2 years. Further rate cuts could weaken the yuan and trigger fears of capital outflows. Overseas investors cut holdings of Chinese bonds for the seventh consecutive month in August. • **Also, the beleaguered property sector and risks in financial markets** limit room for implementing broad-base policy support to boost the economy.

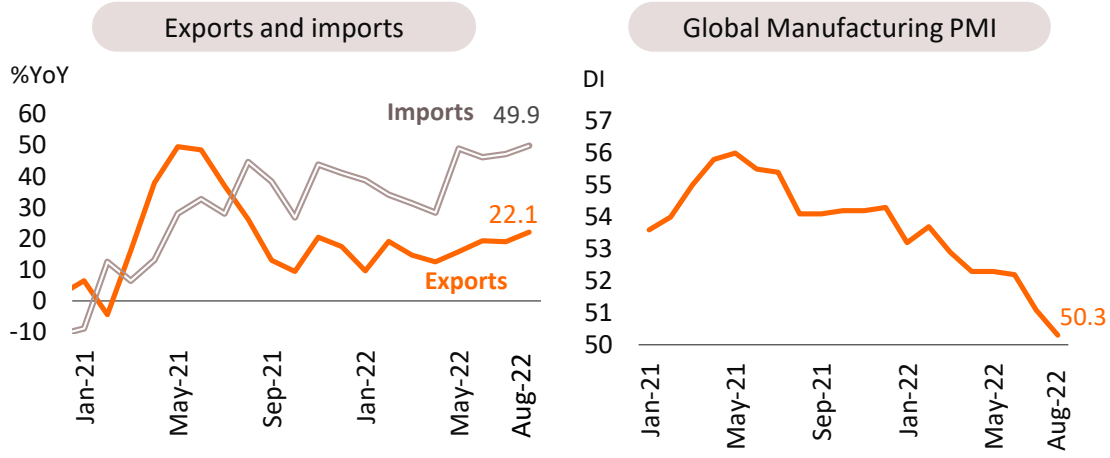
Source: National Bureau of Statistics, General Administration of Customs, PBOC, CEIC, Bloomberg, Krungsri Research

Japan: Economic recovery remains weak in Q3 amid covid wave; global headwinds could cap growth despite relaxing restrictions for inbound tourists and easing supply disruption

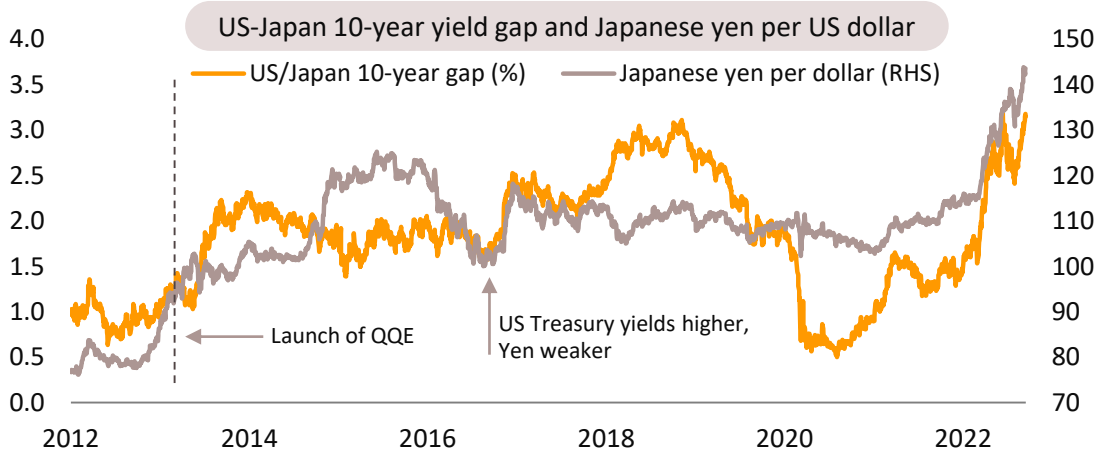
Consumer spending showed signs of weakness while business investment has improved on easing supply disruption



Exports rose on easing supply disruption, but further expansion could be pressured by global slowdown; surging imports reflect higher costs



Yen slumped to the weakest level since August 1998 to beyond 144 against US dollar, amid widening US-Japanese yield gap, worsening costs and inflation



Source: Japan's Cabinet Office, Google, Ministry of Finance, BOJ, Markit, Capital Economics, Bloomberg, CEIC, Krungsri Research

BOJ to retain ultra-loose monetary policy; despite weaker yen and rising inflation, chance of policy tweak will increase if recovery gains momentum.

Our views	BOJ comments and key issues
BOJ to maintain ultra-low interest rates	• Responding to the weak economic recovery, **the Bank of Japan (BOJ) is likely to keep its monetary easing unchanged this year**, including negative interest rates, yield curve control, and asset purchase programs. The BOJ recently said it *"will not hesitate to take additional easing measures if necessary."* • **However, the BOJ might end the remaining part of its special Covid funding program soon.**
Chance of policy tweak depends on FX, inflation, and growth momentum	• **Despite signs of FX intervention following the Finance Minister's recent comments, the yen dropped to a 24-year low against the US dollar and could weaken further**, pressured by widening yield gap between Japan and the US. A surge in import costs is threatening real spending by households and small businesses. • **Headline inflation rose to a 7-1/2-year high of** 2.6% in July 2022, beyond the BOJ's 2% target and vs 2.4% in June. Core inflation also rose, to 2.4%. • **The weakening yen and rising inflation are putting more pressure on the BOJ. However, policy tweaks or adjustments would also depend on growth momentum**, and balancing headwinds from global slowdown and tailwinds from relaxing travel restrictions and easing supply disruption.

Thailand: Strong recovery in tourism despite greater headwinds

- **Krungsri Research is keeping Thai GDP growth forecast for 2022 at +3.1%**, premised on stronger domestic spending and recovering tourism activity. However, upside would be limited by high inflation, rising interest rates, and other headwinds.
- We fine-tuned components for our GDP forecast to reflect the latest economic situation. **Our 2022 forecast for foreign tourist arrivals has been revised up to 10.4mn (from 8mn previous projection).** Private consumption growth has been nudged up to +4.7% from +4.2% previous forecast, to reflect surprise gains from reopening tailwinds and rising pent-up demand. However, we trimmed **overall investment growth forecast to reflect delayed infrastructure investment, global economic slowdown, and higher external uncertainty.** Export growth forecast is kept at +7.5% compared to +11.5% in the first 7 months of this year.
- **Headline inflation is expected to peak in August but core inflation could rise further the rest of the year and exceed 3%** driven by recovering domestic demand and pass-through effects of production costs onto consumer prices.
- On interest rate outlook, given the Fed's more-aggressive-than-expected monetary policy tightening and rising domestic core inflation, **we now expect the Thai MPC to raise policy rate at its September and November meetings to 1.25%** (vs 1% previous forecast).

Krungsri Research Forecasts for 2022

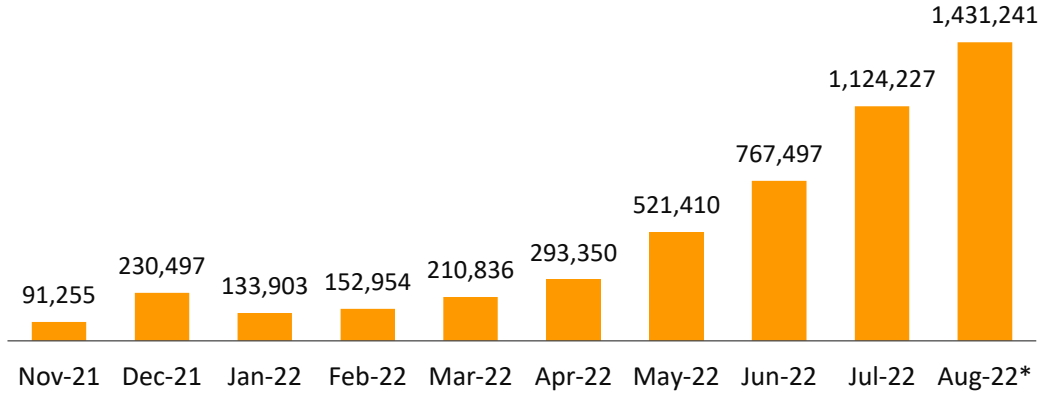
Krungsri Research Forecast		2020	2021	2022F	
				Previous	Latest
GDP growth	YoY (%)	-6.2	1.5	3.1	3.1
Private Consumption Expenditure	YoY (%)	-1.0	0.3	4.2	4.7 ▲
Government Consumption Expenditure	YoY (%)	1.4	3.2	-0.5	-0.5
Private Investment	YoY (%)	-8.2	3.3	3.0	2.8 ▼
Public Investment	YoY (%)	5.1	3.8	1.8	0.2 ▼
Nominal Exports in USD (f.o.b.)*	YoY (%)	-6.5	19.2	7.5	7.5
Nominal Imports in USD (f.o.b.)*	YoY (%)	-13.8	23.9	17.0	17.0
Current Account Balance	USD, bn	20.3	-11.0	-12.0	-16.5 ▼
Tourist Arrivals	Mn, persons	6.7	0.4	8.0	10.4 ▲
Headline Inflation	YoY (%)	-0.8	1.2	6.1	6.1
Exchange rate (end of period)	THB/USD	30.0	33.4	34.8	35.5 ▲
Policy Interest rate (end of period)	(%)	0.50	0.50	1.00	1.25 ▲
Dubai crude price - period average	USD/bbl	41.5	69.0	98.0	98.0

Note: * BOT data

Source: NESDC, BOT, MOC, MOTS, Bloomberg, Krungsri Research

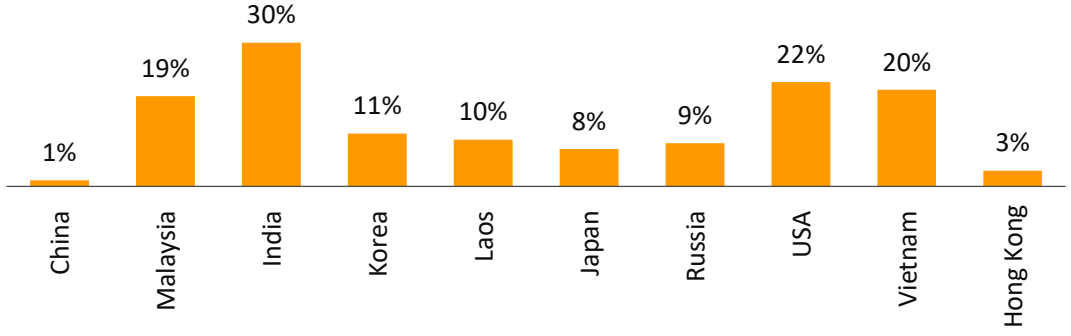
Tourism sector: Foreign tourist arrivals projected to exceed 10 mn in this year after registering 1.5 min in August

Foreign tourist arrivals (persons)



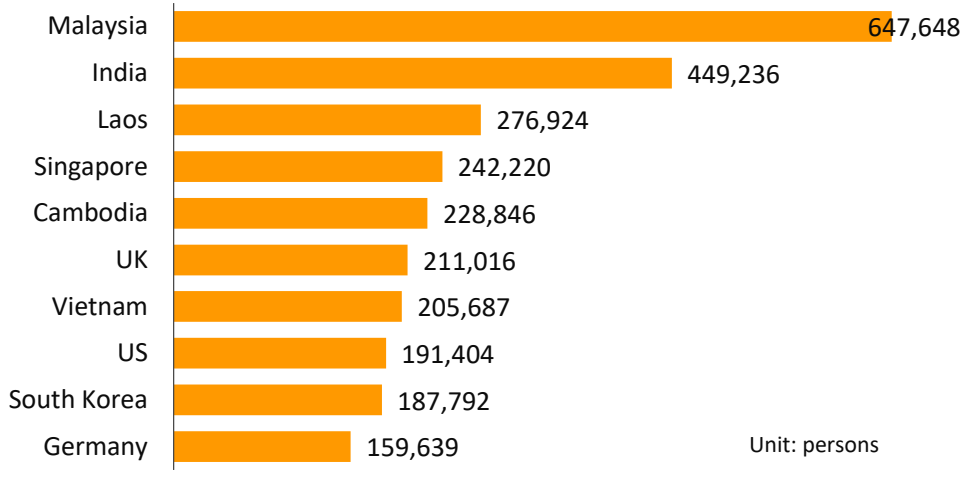
Recovery rate of international arrivals (Jan-Jul 2022)

Unit: % change from pre-Covid level based on 2019 ranking



Note: *Preliminary data
Source: MOTS, BOT, Krungsri Research

Top 10 tourist arrivals by country during January-August*

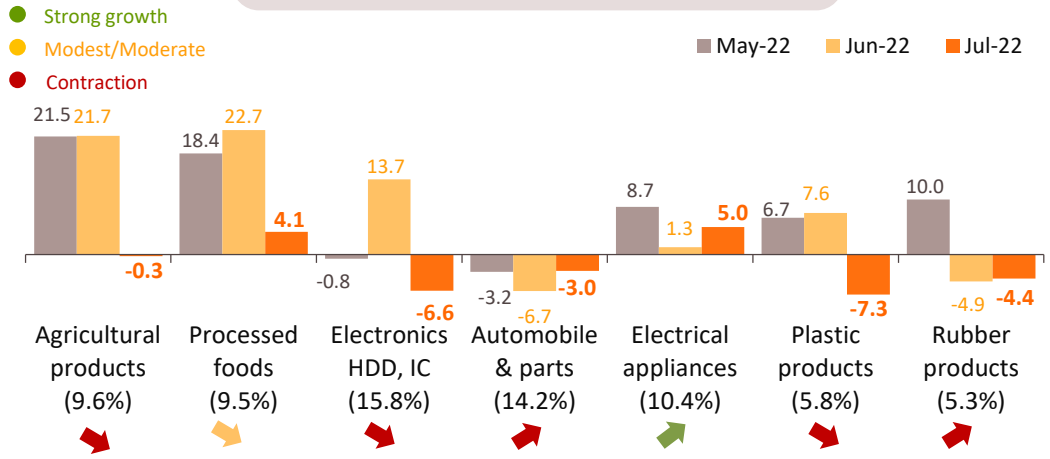


Krungsri Research's view

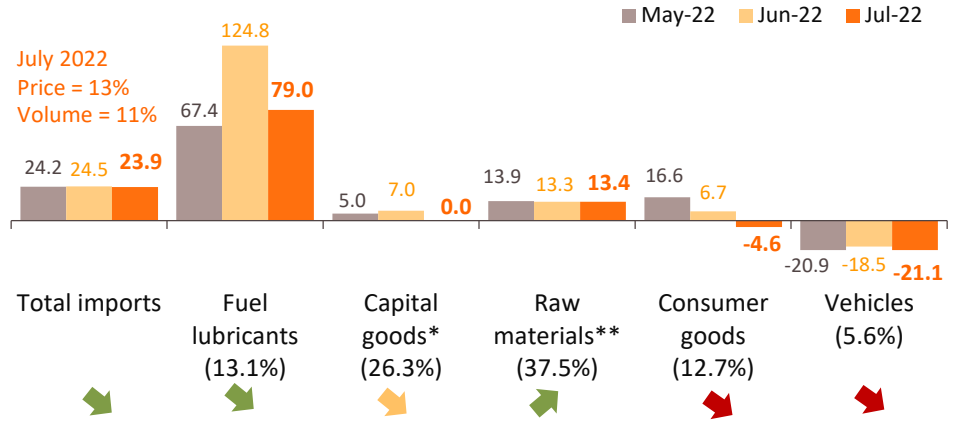
- **In August 2022, foreign tourist arrivals exceeded 1 mn for the second straight month, at 1.43 mn vs** 1.12 mn in July. It was supported by easing travel restrictions since May 1 and cancellation of Thailand Pass scheme since July 1 given the improving COVID-19 situation in Thailand and the region.
- **In the first 8 months of 2022, foreign tourist arrivals reached 4.5 mn and generated THB193 bn in receipts** (vs 26.6 mn, THB1.25 trn during Jan-Aug 2019)**,** led by tourists from Malaysia, followed by India, Laos, Singapore, and Cambodia. There are tailwind the rest of the year to boost foreign tourist arrivals and spending, including the decision to extend tourist visa-free period to 45 days (from 30 days previously), and for Visa-on-Arrival (VOA) for selected countries to 30-days (from 15 days previously), from October 1, 2022-March 31, 2023. These will lure more foreign tourists to Thailand. **Hence, we now expect foreign tourist arrivals to reach 10.4 mn instead of** 8 mn projected earlier. Nonetheless, tourism revenues may be affected by high fuel prices and inflation, which would lift travel and accommodation, F&B and other costs.

Export growth decelerated due to weaker demand from US, China and Japan, but exports to ASEAN countries remained strong

Exports by major product (%YoY)

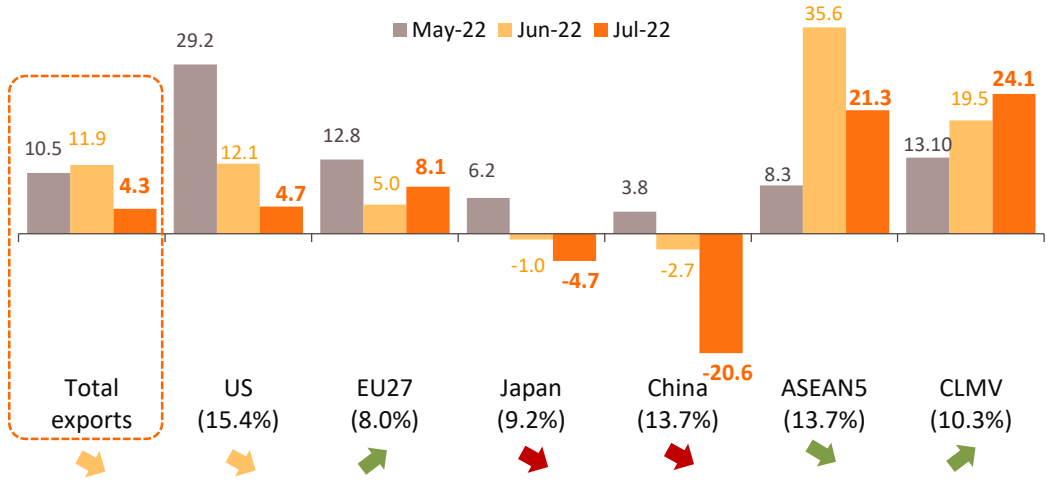


Imports by major product (%YoY)



* Capital goods excl. aircraft, ship ** Raw materials exclude gold

Exports by major destination (%YoY)



Source: MOC, Krungsri Research

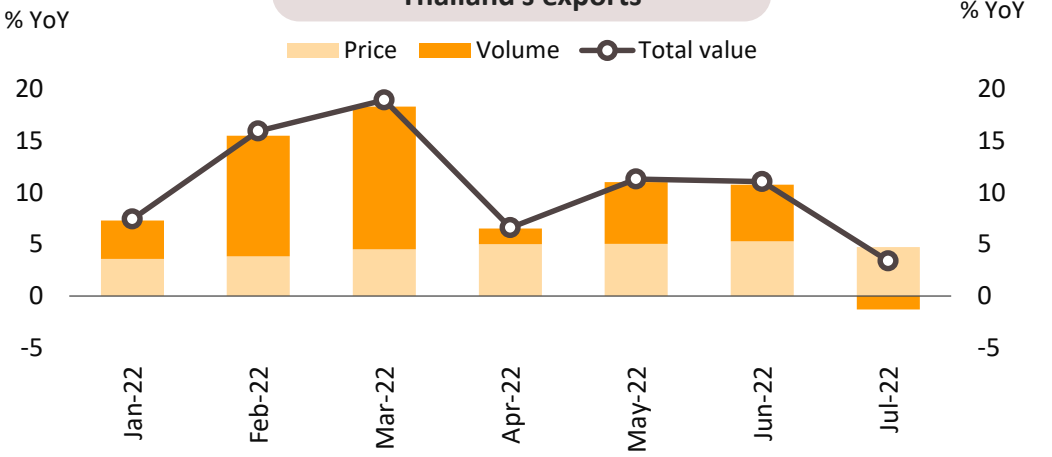
Krungsri Research's view

- **In July, merchandise export value grew at a 17-month low of 4.3% YoY to USD 23.6 bn** and tumbled from 11.9% in June. Excluding oil, gold and weapons, exports expanded 4.1% fueled by demand for processed foods in global markets to ensure food security. However, exports of electronic products reversed to a contraction. Shipments of automobiles and parts contracted for the fifth consecutive month. **By destination,** exports to ASEAN countries performed well but were slower to the US. Shipments to China and Japan posted a deeper contraction in line with subdued production and slower demand because of rising Covid-19 cases.
- **Thai exports is projected to decline the rest of the year, from 11.5% growth in the first 7 months of 2022, due to several headwinds**: (i) weak global purchasing power due to higher cost of living, with a possible slowdown in developed economies amid tightening moves by central banks to contain inflation; (ii) sluggish demand from China because of extended lockdowns in major cities to control the resurgence of Covid-19 cases there. The current heatwave is also hurting production; creating greater downside risk to the Chinese economy; and (iii) rising production costs in line with higher energy prices and raw material shortage, especially semi-conductors because of tensions between the US and China.

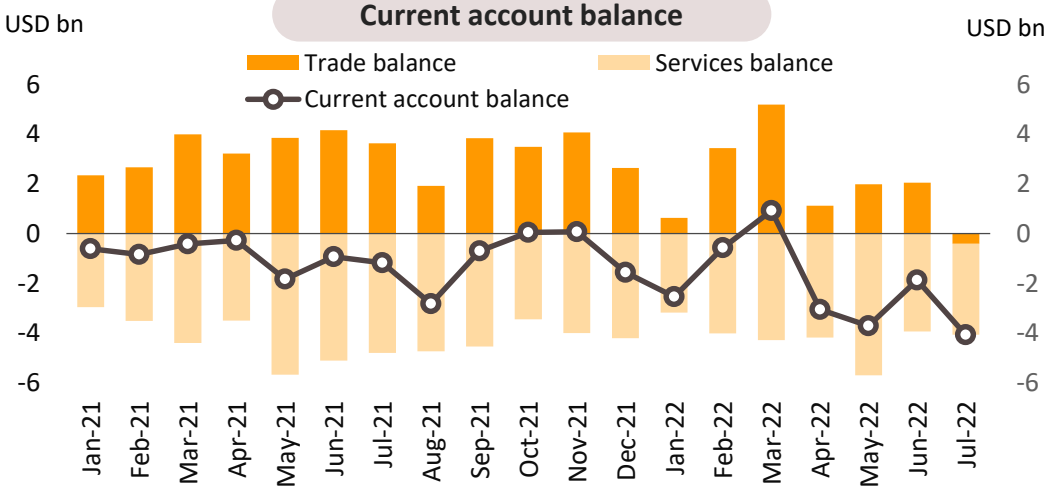
Export volume fell in July, the first contraction in 17 months; current account deficit is the worst in 9 years

Given the slowdown in trading partners' economies, export value rose in July because of higher prices but at slower pace than in 1H2022. Export volume fell for the first time since March 2021. Income from travel picked up in July, driven by rising foreign tourist arrivals, which exceeded 1 mn. However, services expenditure surged because of higher transportation costs; these led to the large current account deficit. For 2022, Krungsri Research forecasts current account deficit would widen to USD16.5 bn from USD 11 bn in 2021.

Thailand's exports



Current account balance



Source: MOC, BOT, CEIC, Krungsri Research

Exports by major product and destination

Thailand: July's export growth (% YoY)	World	US (15%)	EU (8%)	Japan (9%)	China (14%)	ASEAN-5 (14%)	CLMV (10%)
Total	**+4.3**	**+4.7**	**+8.1**	**-4.7**	**-20.6**	**+21**	**+24**
Cars & parts (10.7%)	-2.9	+8	-11	+2	-88	+39	-29
Computer & parts (8.1%)	-20	-8	-2	+17	-28	-24	-4
Rubber products (5.3%)	-4	-12	-13	-8	+21	+16	+22
Plastic resin (4.2%)	-10	-12	-3	+9	-18	-8	-8
Chemical products (3.6%)	-3	+5	+93	-25	-58	-1	+0.4
Electronic IC (3.1%)	+4	+34	+18	+10	+9	+11	+113
Fresh, frozen & dried fruit (2.2%)	-20	-26	+19	-48	-17	+10	+76
Rubber (2.1%)	+12	+4	+29	+27	-14	+41	-10
Plastic products (1.7%)	-0.2	-3	-4	-3	-27	+4	+14.54
Electrical appliances (1.6%)	+20	+61	+16	+14	-21	+31	-15
Tapioca products (1.5%)	-10	+75	+66	-4	-35	+100	+3
Preserved fish, crustaceans (1.3%)	+16	+12	-7	-2	-19	+26	+11
Sugar (1.2%)	+259	+16	+6	+143	+235	+239	+57
Rice (1.3%)	+22	-28	-22	+23	-15	+102	+2

Substitution effects

Supply disruptions hurt production and exports

China's slowdown from zero Covid policy

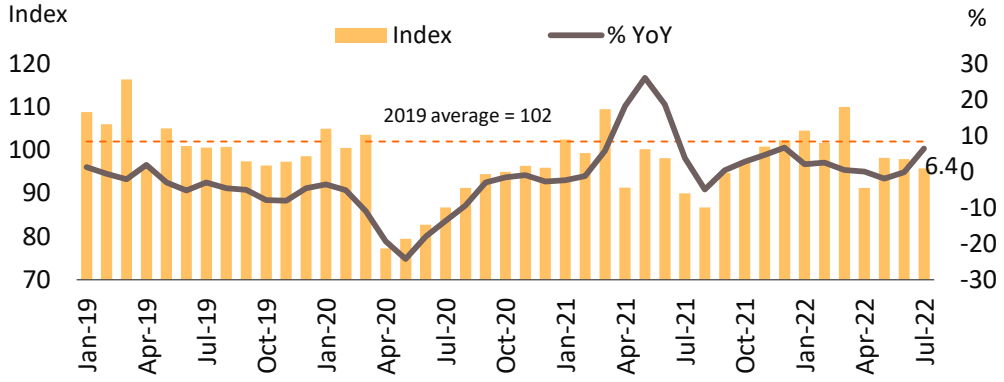
Reopening tailwinds & RCEP benefit

Note: (% share in 2021)

Manufacturing production improved for some goods, especially those targeted at domestic demand; export-oriented industries remained weak

Manufacturing production grew at a slower pace of 6.4% YoY in July, but on a monthly basis, it fell from June and for the second straight month. Overall, capacity utilization rates in some industries remained below pre-pandemic levels, led by automotive, medical, electrical appliances, and HDDs. That for machinery and jewelry have exceeded pre-Covid levels. Looking ahead, manufacturing output would face headwinds triggered by slowdown in trading partners' economies as they tighten monetary policies to contain inflation and a downturn in China's economy due to lockdowns in several cities under its Zero-Covid policy.

Manufacturing Production Index



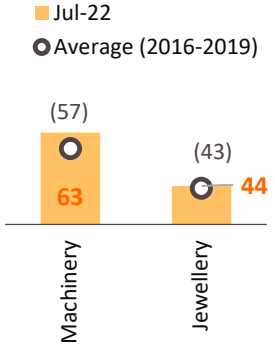
Manufacturing Production Index by sector

Manufacturing Production (%YoY)*	Weight	2020 J F M A M J J A S O N D	2021 J F M A M J J A S O N D	2022 J F M A M J J
All industry	100.0%			
Food & Beverages	20.3%			
Automotive	13.8%			
Petroleum	9.5%			
Chemicals	9.1%			
Rubbers & Plastics	8.8%			
Cement & Construction	5.5%			
IC & Semiconductors	5.5%			
Electrical Appliances	3.8%			
Textiles & Apparels	3.5%			
HDD	3.4%			

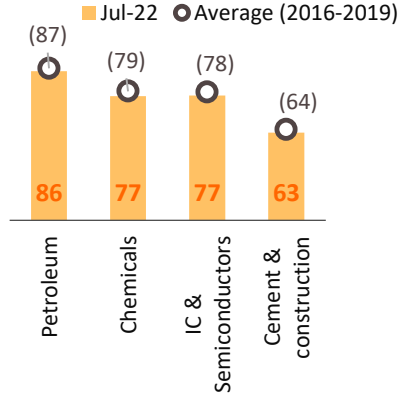
**Green > 0%, Red < 0% / Darker green (red) indicates stronger (weaker) momentum*

Capacity utilization by sector (Index)

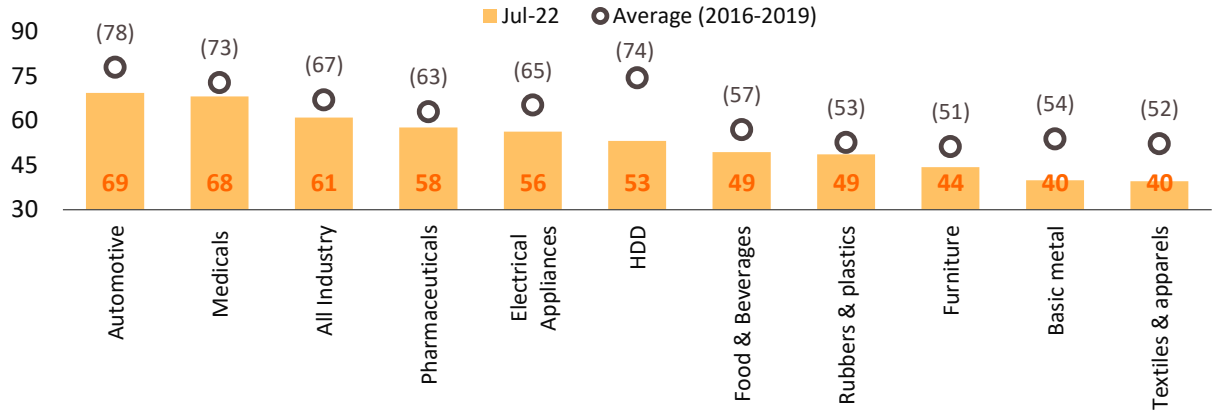
Above pre-COVID level



Approaching pre-COVID level



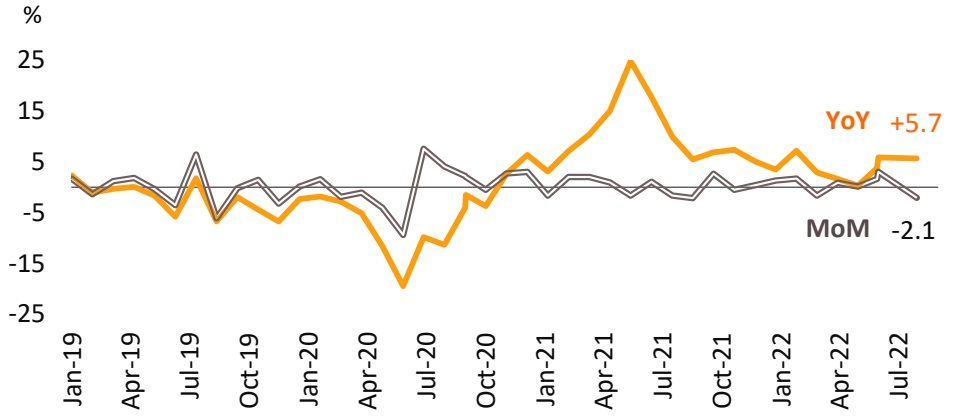
Below pre-COVID level



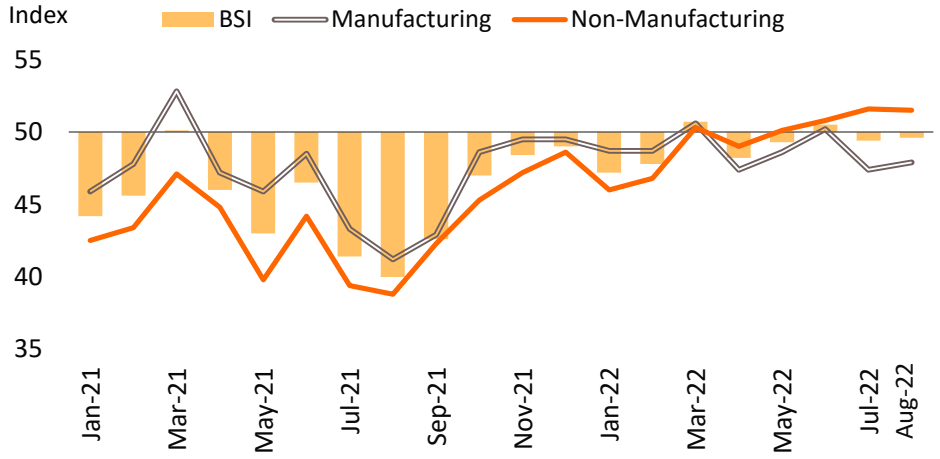
Source: OIE, Krungsri Research

Private investment will recover slowly amid higher energy prices and minimum wage

Private Investment Index



Business Sentiment Index



Source: BOT, Krungsri Research

Private Investment by category

%YoY*	2020												2021												2022						
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J
Private investment																															
Construction area permitted																															
Construction material sales																															
Imports of capital goods																															
Machinery sales																															
Newly registered vehicles																															

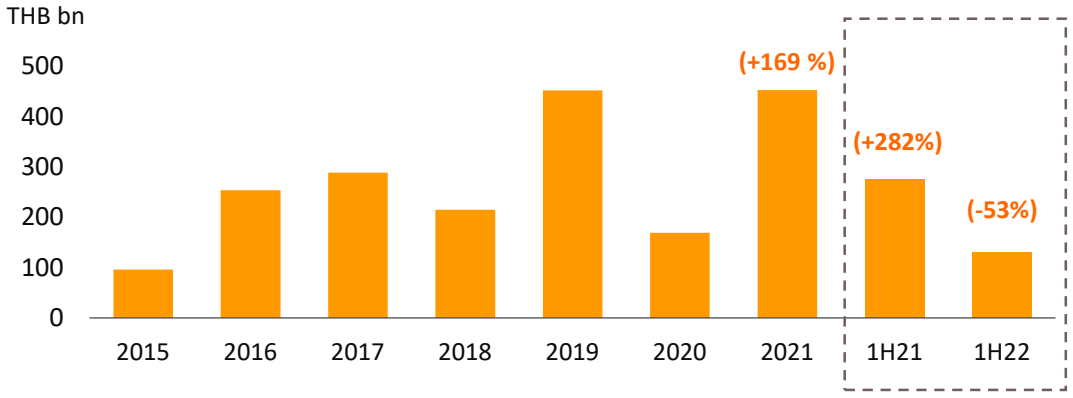
**Green > 0%, Red < 0% / Darker green (red) indicates stronger (weaker) momentum*

Krungsri Research's view

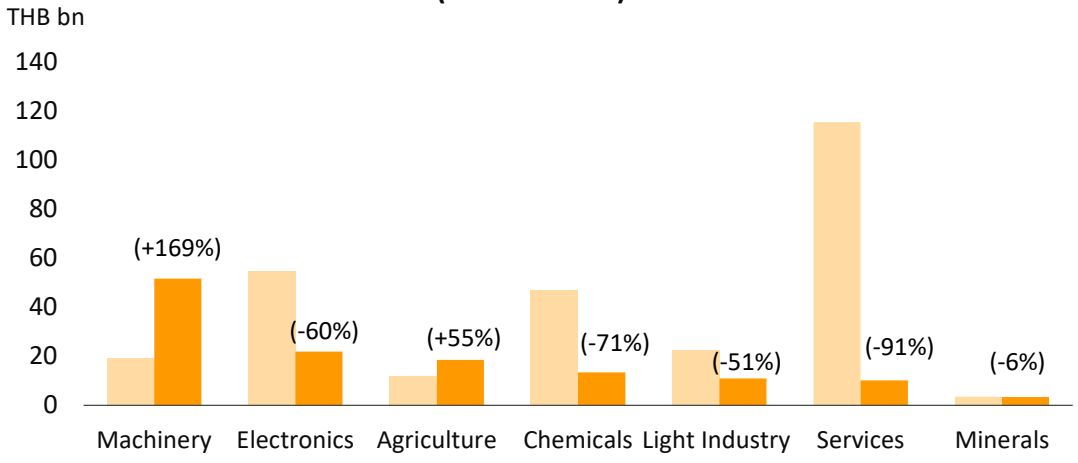
- **In July, Private Investment Index rose 5.7% YoY but fell 2.1% MoM**. On year-on-year basis, investment in machinery & equipment grew in line with rising sales of machinery to manufacture plastic products and garment & clothing. Investment in construction expanded with rising sales of construction material and more approvals for construction of factories and residential projects**.**
- **Business Sentiment Index (BSI) showed uneven recovery** and remained below-50 in August, at 49.6 vs 49.4 in July, due to concerns over high costs, especially for manufacturers. However, sentiment in the non-manufacturing sector improved and exceeded-50 for the fourth straight month, in line with improving economic activity. Looking ahead, private investment would be pressured by rising energy prices and minimum wage. **These led Krungsri Research to trim private investment growth from +3.0% to +2.8%.**

Smaller FDI inflow in 1H22 could reflect weak recovery in private investment; benefits of reopening and recovering tourism may attract FDI in 2H22

Total FDI applications by value

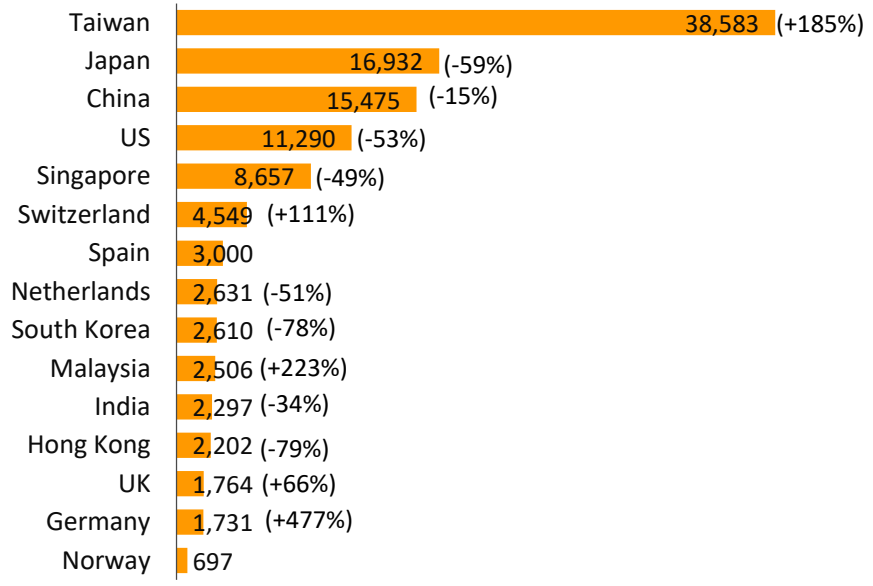


FDI applications for BOI privileges by industry (Jan-Jun 2022)



Note: (% change, YoY)
Source: BOT, BOI, Krungsri Research

FDI applications for BOI privileges in 2022 (Jan-Jun)
Top 15 by investment value (THB mn)



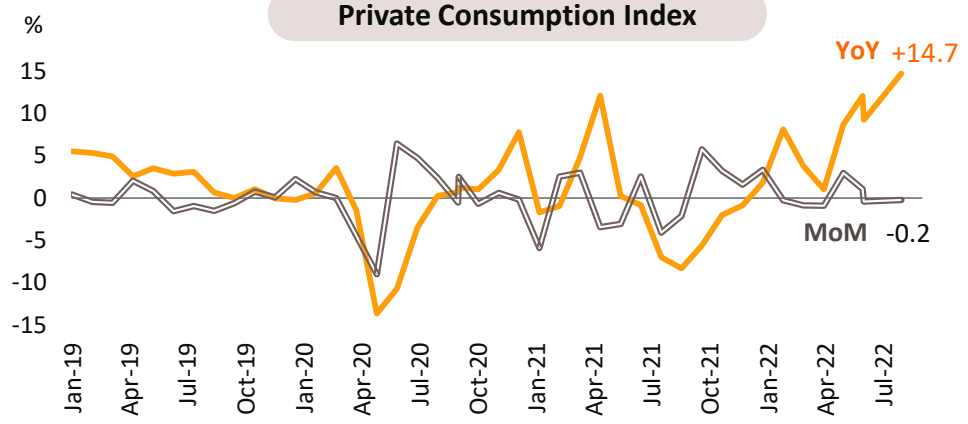
Krungsri Research's view

- **In 1H22, the number of applications for foreign direct investment (FDI) projects for BOI privileges fell by 52.6% with a combined value of THB130 bn,** compared to THB453 bn (+169% YoY) in 2021. The biggest investment value was in metal products and machinery at 40%, followed by electric & electronic products (17%) and agriculture products (14%). Taiwan was the largest FDI contributor with applications to invest in EV and related industries, followed by Japan, China, the US and Singapore. **In the period ahead, benefits of reopening and the recovering tourism sector could attract more FDI. However, FDI could be affected by a possible global economic downturn due to inflation; geopolitical tensions; and concerns over domestic political stability.**

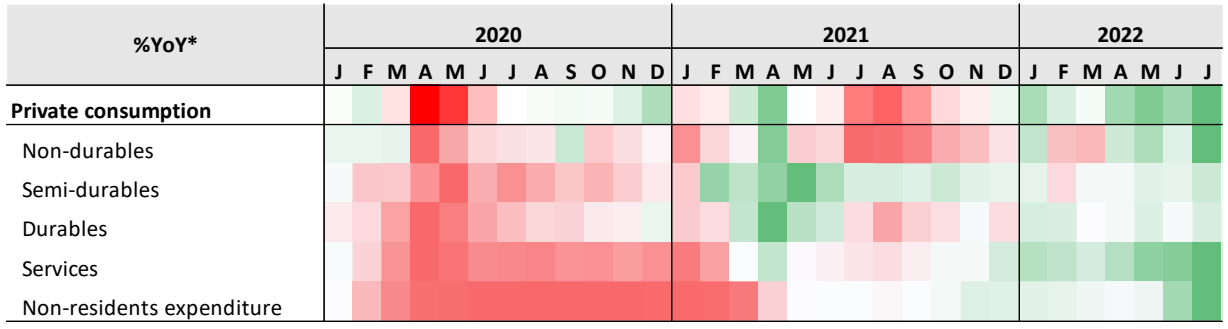
Private consumption: Despite higher cost of living, domestic spending would rise following recovering tourism industry and supportive measures from the government

In July, private consumption index rose 14.7% YoY but edged down 0.2% MoM. There was growth in all items in line with higher household purchasing power as result of rising employment and farm income and improving consumer confidence. For the rest of the year, although consumption will face headwinds such as high inflation, there will be tailwinds to mitigate the negative impact, including government aid for welfare card holders and the Co-payment scheme. Such measures are expected to inject almost THB50 bn into the economy. There is also support from a stronger recovery in tourism activity with the improving COVID-19 situation and relaxation of containment measures. **Krungsri Research now projects private consumption would grow by 4.7% this year instead of 4.2%.**

Private Consumption Index

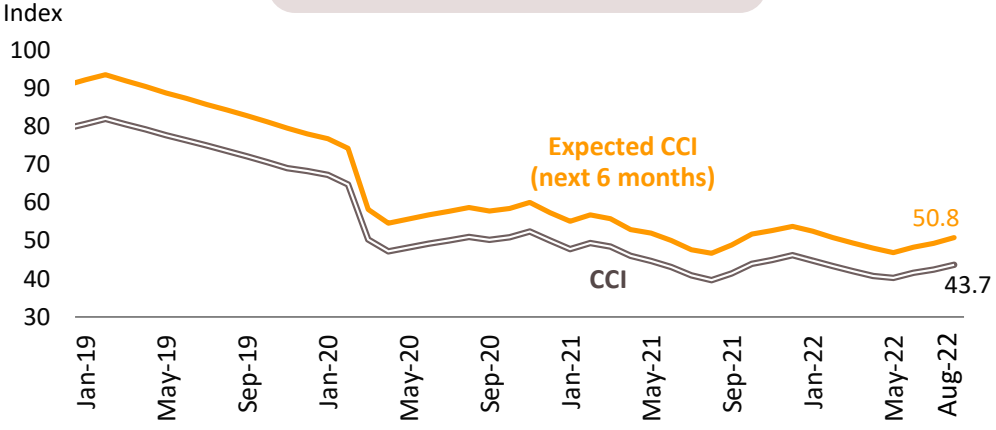


Private Consumption by category

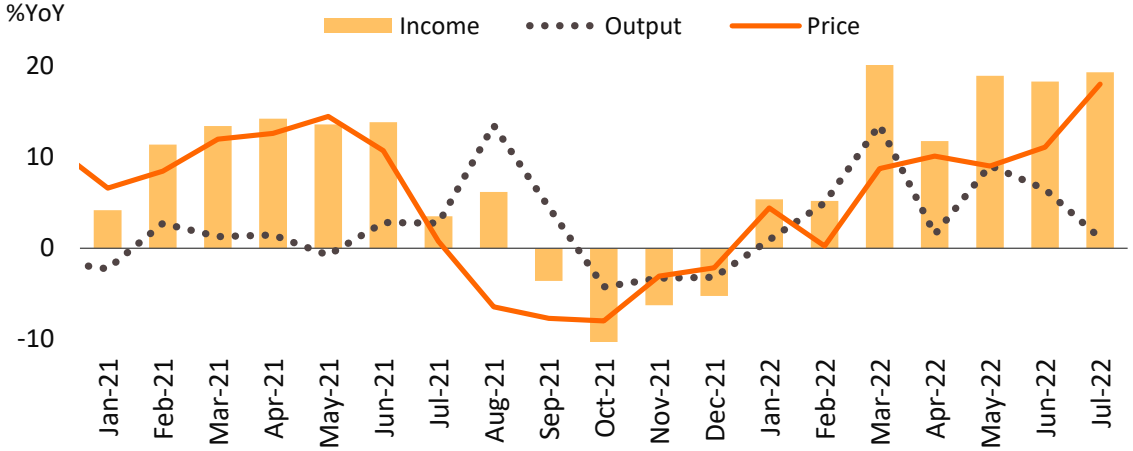


**Green > 0%, Red < 0% / Darker green (red) indicates stronger (weaker) momentum*

Consumer Confidence Index



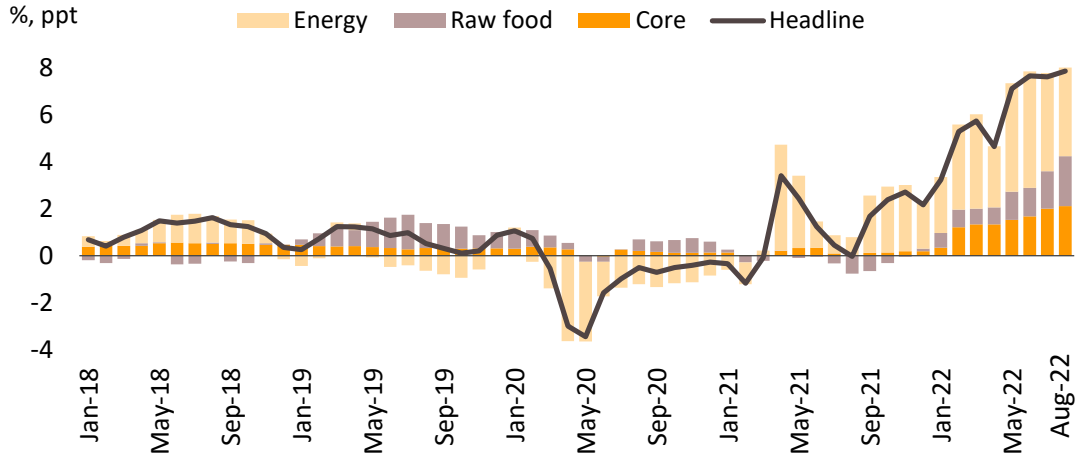
Farm Income



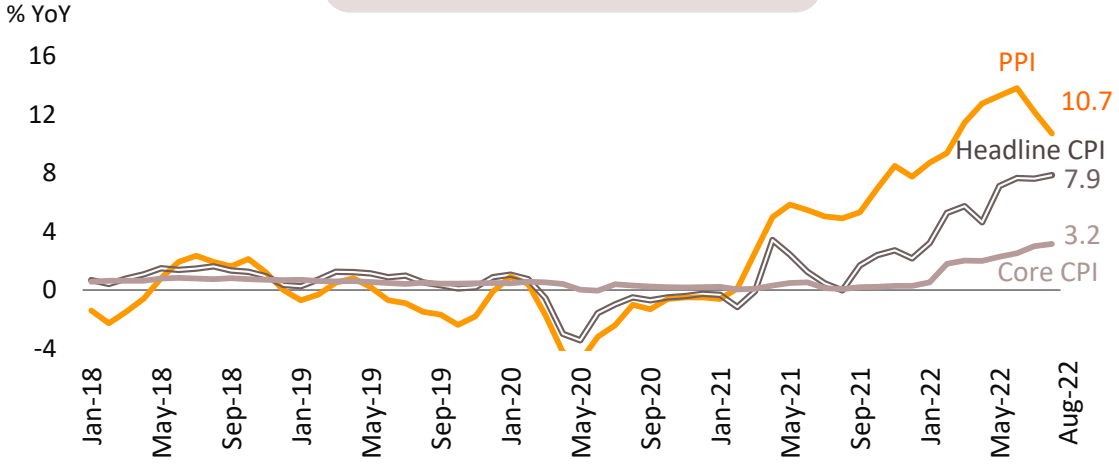
Source: BOT, OAE, UTCC, Krungsri Research

Headline inflation could have peaked in August; higher core inflation might prompt MPC to raise *policy rate* further but gradually given the still-fragile economic recovery

Contributors to inflation



Producer Price Index and CPI



Source: MOC, Krungsri Research

Consumer Price Index: Major categories

Consumer Price Index (% YoY)*	Weight	2020 J	F	M	A	M	J	J	A	S	O	N	D	2021 J	F	M	A	M	J	J	A	S	O	N	D	2022 J	F	M	A	M	J	J	A
Headline CPI	**100.00%**																																
Food & beverages	41.01%																																
Apparel & footwears	2.08%																																
Housing & furnishing	21.93%																																
Medical & personal care	5.36%																																
Transportation & communication	24.08%																																
Recreation & education	4.20%																																
Tobacco & alcoholic beverages	1.33%																																
Raw food	20.71%																																
Energy	14.71%																																
Core CPI	**64.58%**																																

** Green > 0%, Red < 0% / Darker green (red) indicates stronger (weaker) momentum*

Krungsri Research's view

- **Headline inflation rose to a 14-year high of 7.86% YoY in August from 7.61% in July,** due to a combination of (i) a low-base last year, (ii) a 30.5% jump in energy prices although price of gasoline had dropped from the previous month, (iii) still-high prices of diesel, LPG, and electricity which raised transportation and production costs, and (iv) rising price of services such as public transport fares and tuition fees. **Core inflation** (excluding raw food and energy prices) **also rose to a 14-year high of 3.15% in August** from 2.99% in July. For the first 8 months of 2022, headline and core inflation stood at 6.14% and 2.16%, respectively.
- Although headline inflation could have peaked in August, core inflation could rise further and stay above 3% the rest of the year driven by recovering domestic demand and pass-through effects of higher production costs onto consumer prices. Given rising domestic core inflation and the US Fed's more-aggressive-than-expected monetary tightening, **the MPC might raise policy rate at the September and November meetings to 1.25% this year.** The BOT governor said headline inflation would decline gradually to the official target range by 2H2023. Unlike the US, Thailand plans to hike rates more gradually to tame inflation.

Impact of minimum wage hike on Thai economy

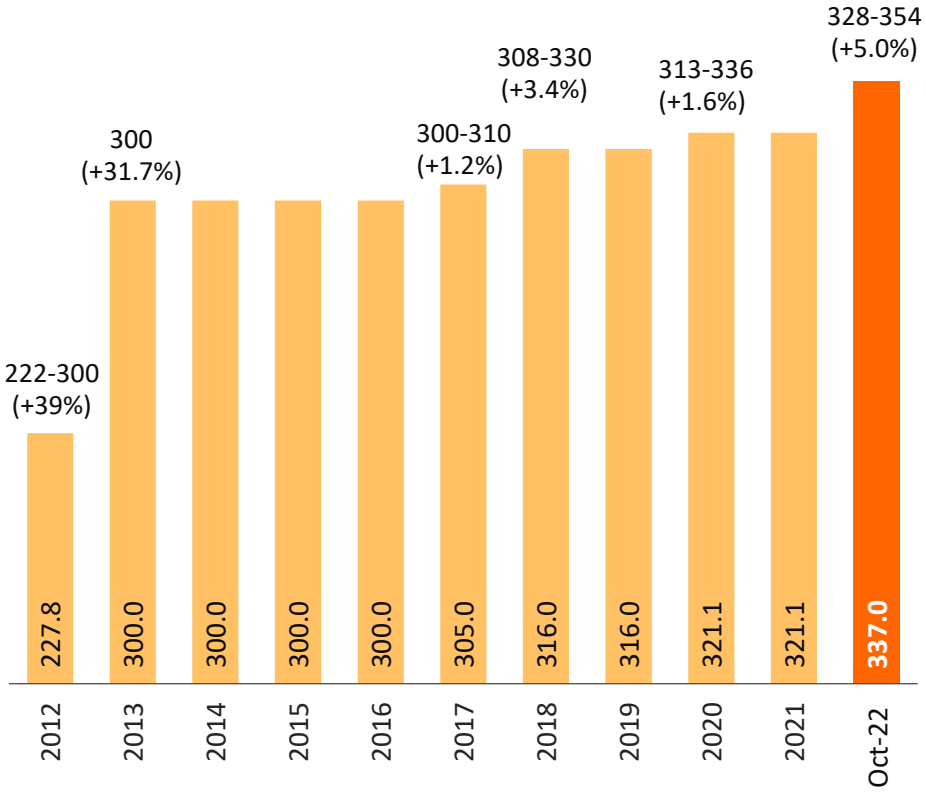
Key point: higher purchasing power; moderate impact on production costs and prices

- Thailand will raise minimum daily wage, unchanged since January 2020, by an average of 5% to THB 328-354, effective October 1, 2022.
- Workers in Bangkok and surrounding provinces will receive the biggest increase of THB 22 to THB 353. The small increase will be THB 8 in Udon Thani and Nan. The highest rate nationwide will be in Chon Buri, Rayong, and Phuket, at THB 354.
- **Minimum wage is rising in line with long-term trends.** Purchasing power will improve in key economic and industrial areas.
- **Main sectors that hiring minimum-wage labor** are agriculture, construction, hotel & restaurant, and manufacturing, especially SMEs. Minimum wage should be raised in response to the recent increase in labor productivity which has exceeded the growth of unit labor cost.
- **The Input-Output analysis suggests a 5% hike in minimum wage would lift production cost by 1.4%, of which 1.2% would be an indirect effect. Production costs would rise in labor-intensive sectors and would also rise overall because of higher input costs.** Sectors which would be affected most would be business activity & real estate, construction, mining and manufacturing. Within the manufacturing sector, they would be leather, furniture, beverage, and wood products industries.
- The impact of minimum wage hike would be relatively larger in small industries which account for less than 1% of GDP. The 1.4% increase in overall production cost would lift baseline inflation by 0.46%.
- To conclude, the minimum wage hike would improve purchasing power while production costs and consumer prices would increase at a moderate pace.

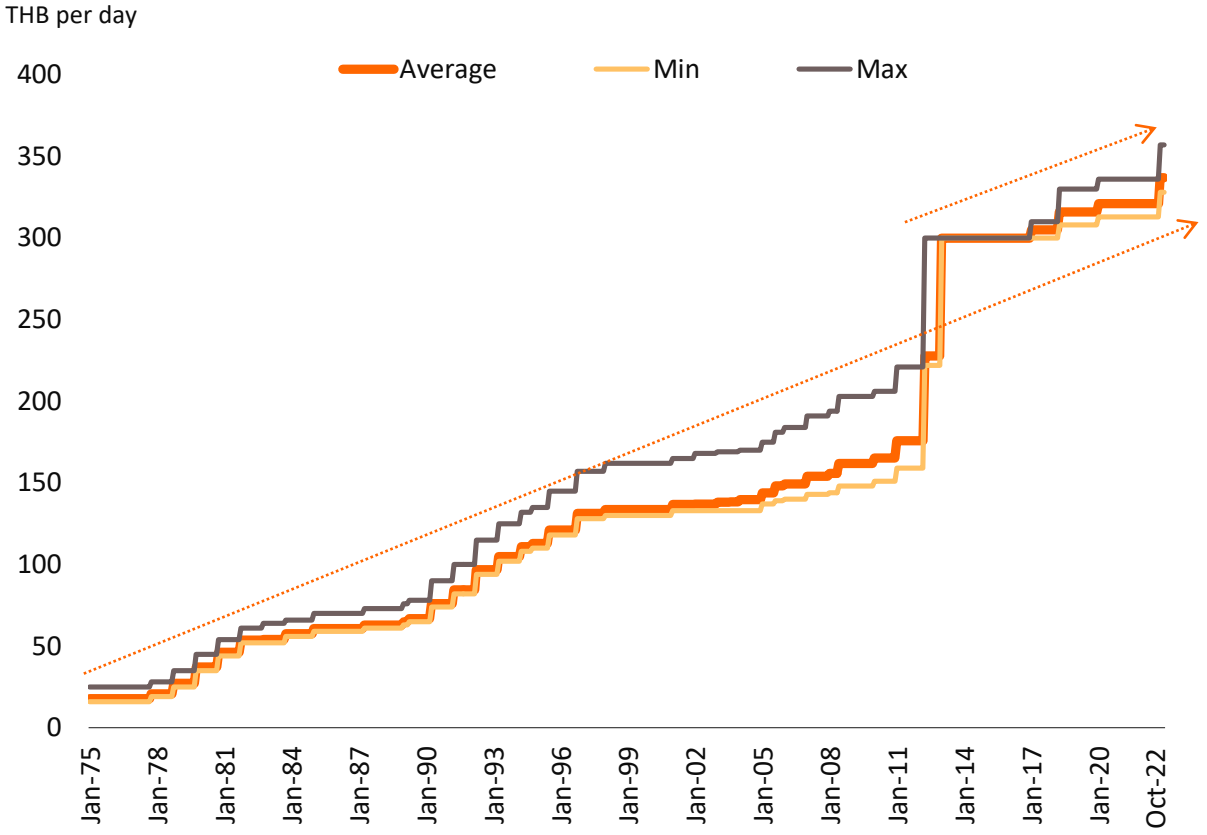
Minimum wage is set to increase, in line with long-term trend

The minimum wage was last raised in January 2020 to a range of THB313-336 a day (+1.6%) from THB308-330 a day in 2018. **On 26 August 2022, the Tripartite Wage Committee agreed to raise the minimum daily wage by 5.02% to THB 328-354** effective October 1, 2022. The increase this year is in line with its long-term trend.

Average minimum wages (THB/Day)



Historical minimum wage hikes

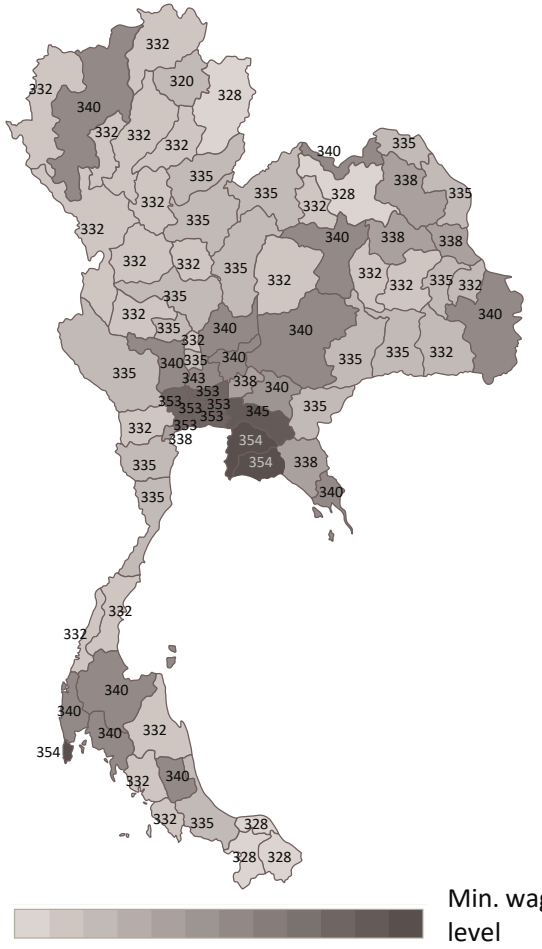


Source: Ministry of Labor, Krungsri Research

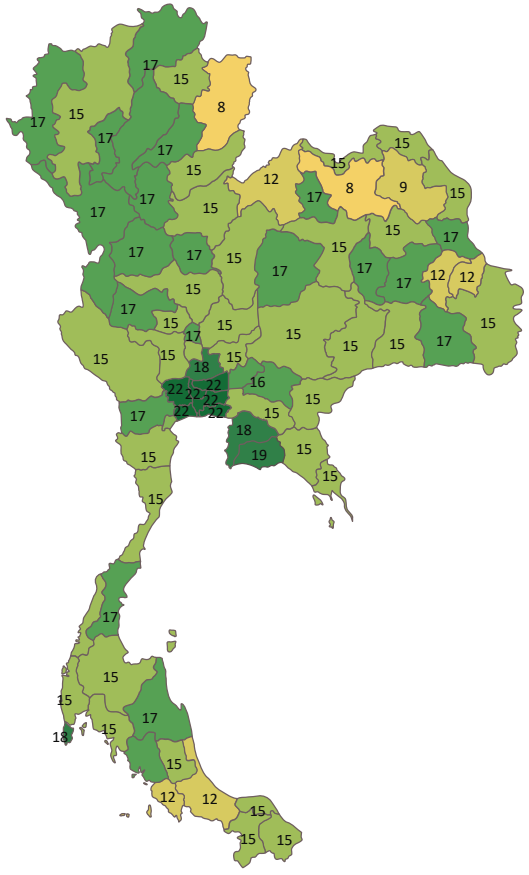
Purchasing power will improve in key economic and industrial areas

There are nine levels of new minimum wage with increments of THB 8-22 or rising by 2.5-6.6%. The highest rate would be THB354 (rising by THB 18-19 or 5.4-5.7%) in Chonburi, Rayong and Phuket, followed by THB353 (rising by THB 22 or 6.6%) in Bangkok and surrounding provinces. The lowest rate would be in Yala, Pattani and Narathiwat, Nan and UdonThani, at THB328 (up THB 8 or +2.5%).

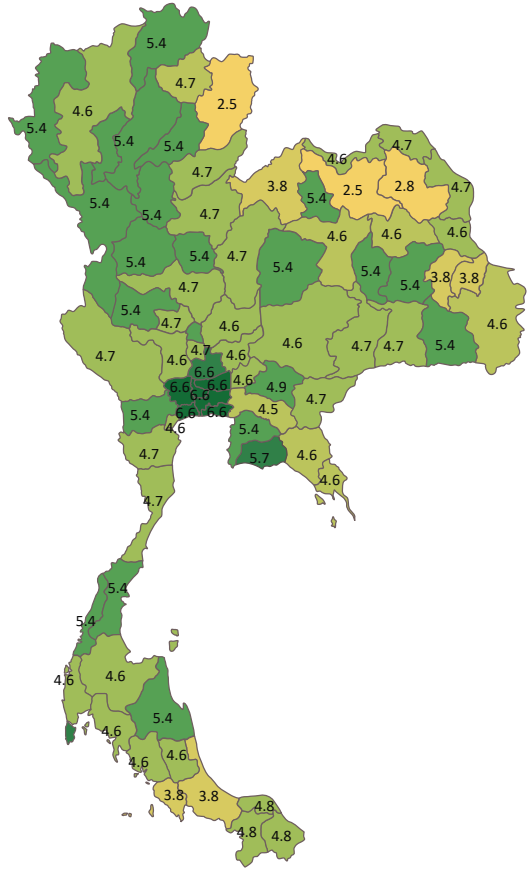
New minimum wage (THB)



Minimum wage hike in THB



% change in minimum wage

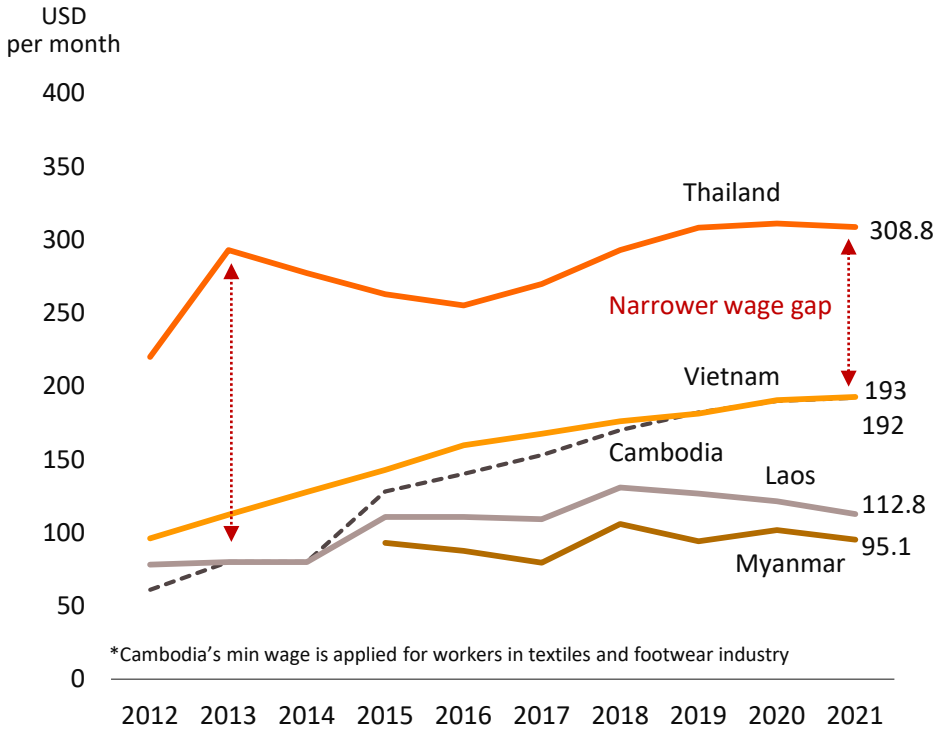


Source: Ministry of Labor, Krungsri Research

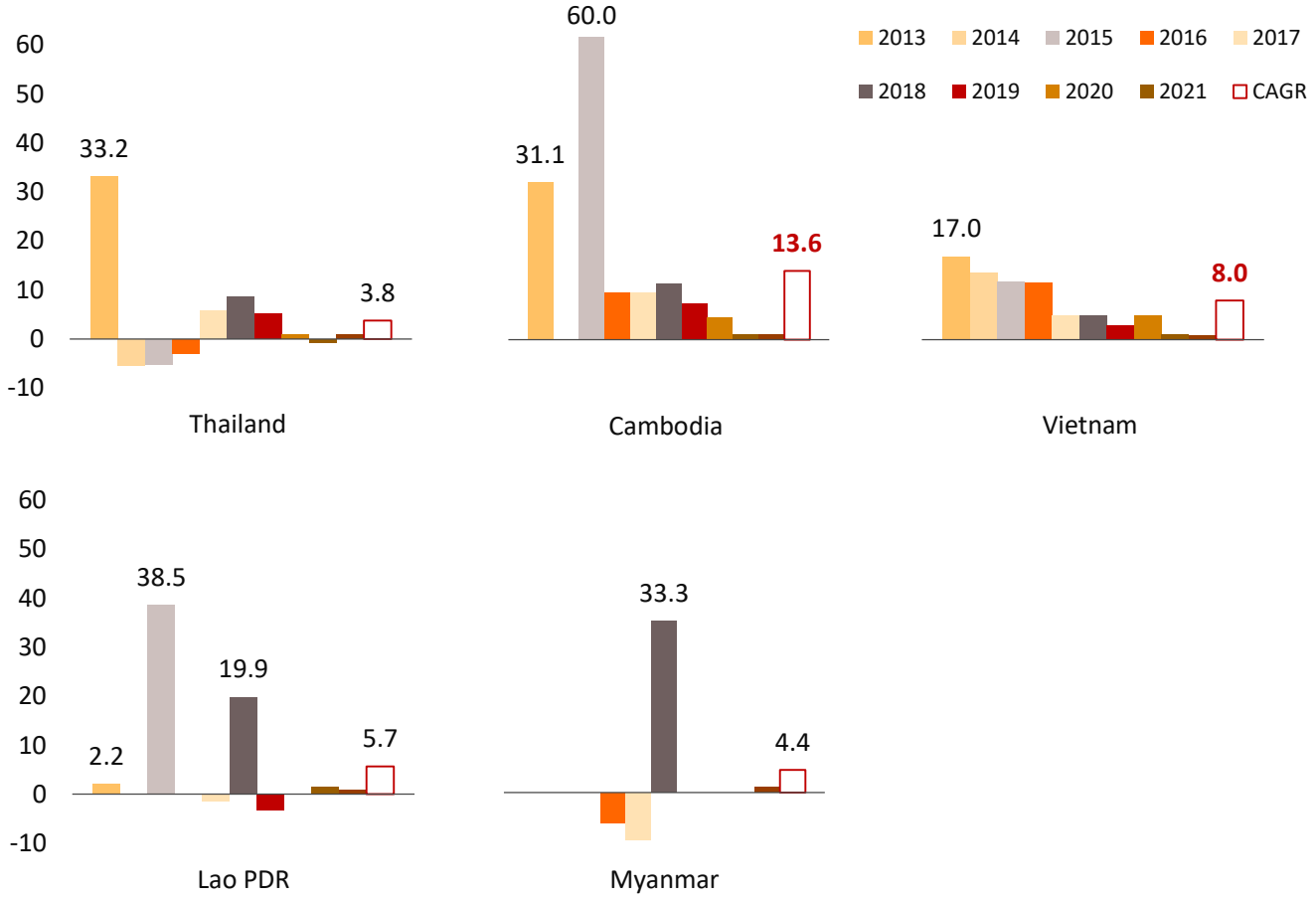
Comparison with CLMV: Wage gap between Thailand and CLMV is narrowing

In the past decade (2012-2021), Thailand's minimum wage in US dollar had risen by an average of 3.8%, slower than that in CLMV region. But the gap between Thailand and CLMV is narrowing. In 2022, CLMV countries - except Myanmar - have raised minimum wage. Laos' minimum wage in local currency has increased by 9.1% to 1.2 million Kip, starting August 1. Vietnam raised regional minimum wage by around 6% to VND 4.68 million from July 1, 2022. In Cambodia, minimum wage for regular workers have been raised by 1% to USD 194 per month from January 2022 (USD 192 in 2021). In Thailand and Laos, the weaker local currencies would cause their minimum wages in US dollar to fall this year.

Average minimum wage* (USD)



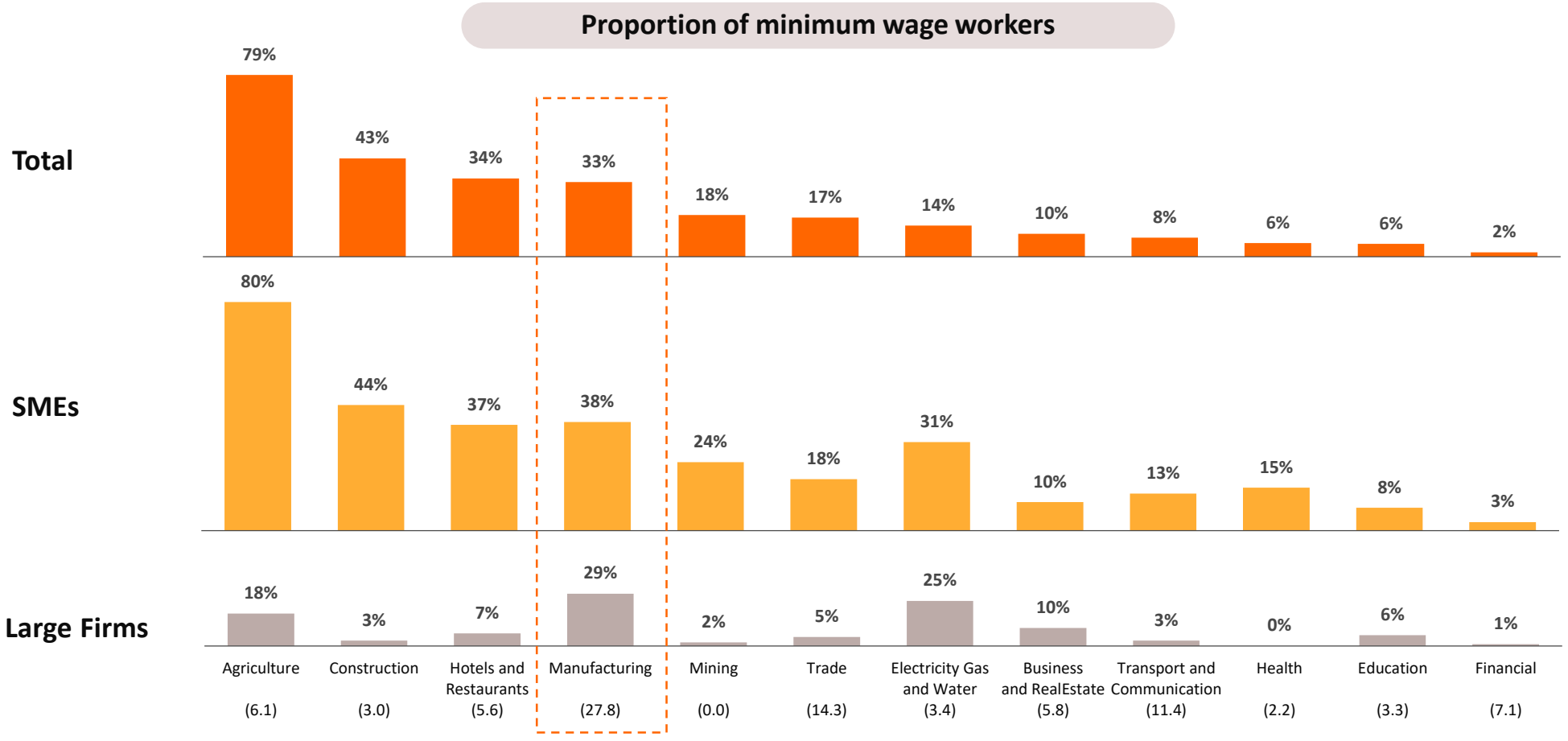
Growth of minimum wage (% change in USD)



Source: International Labour Organization, Thailand's Ministry of Labor, Krungsri Research

Main sectors which hire minimum wage labor are agriculture, construction, hotel & restaurant and manufacturing, especially SMEs

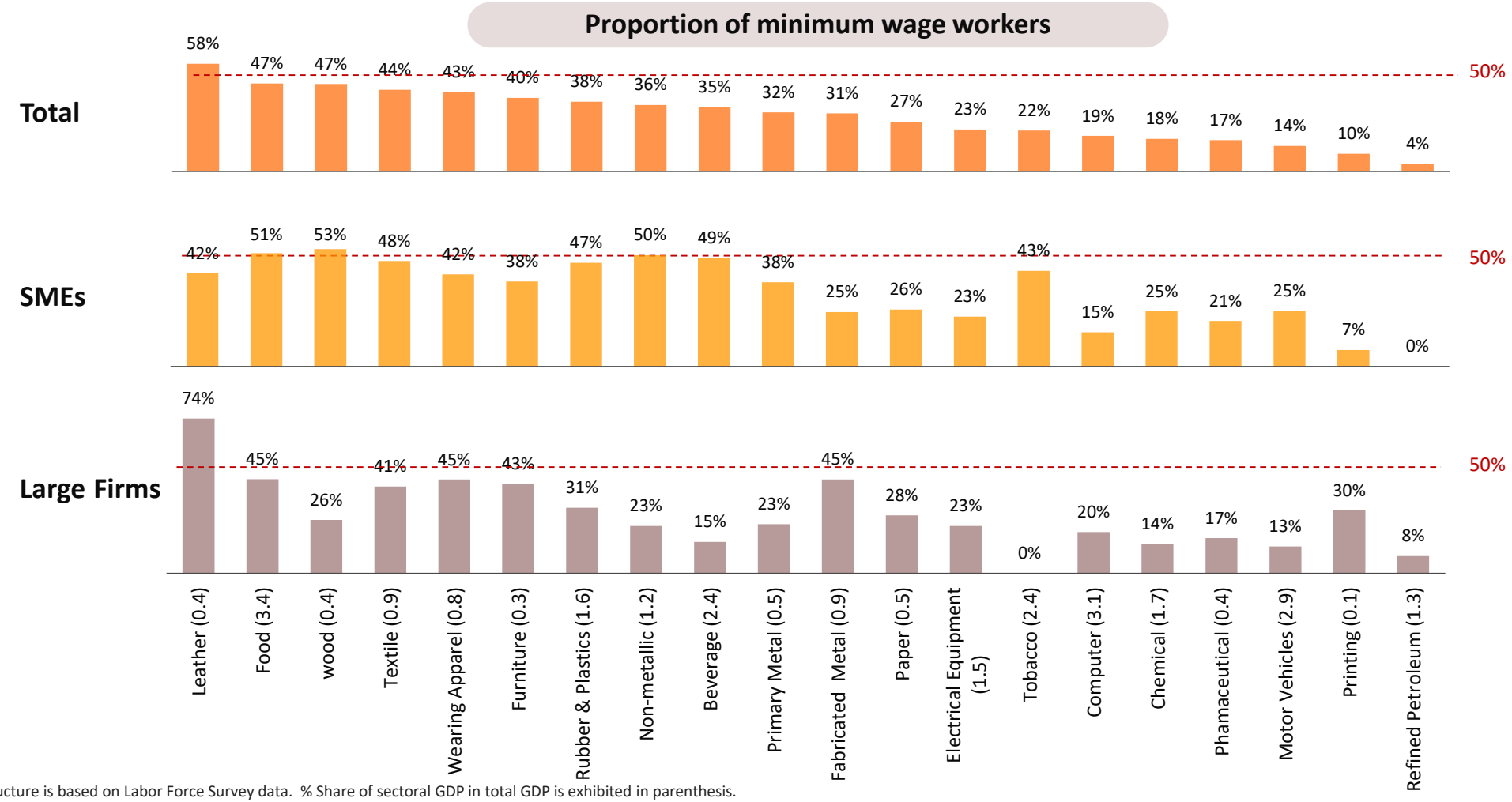
The employment of minimum-wage workers in agriculture and construction sectors reached 79% and 43% of total workers, respectively. Pre-covid, output of both sectors accounted for a combined 9% of GDP, mainly contributed by SMEs. The share of minimum-wage workers in hotel & restaurant and manufacturing sectors exceeds 30%. Output of both sectors accounted for a combined 33% of GDP, led by manufacturing (27.8% share). In the manufacturing sector, both SMEs and large-scale businesses employed minimum-wage workers.



Note: Labor structure is based on Labor Force Survey data. % Share of sectoral GDP in total GDP is exhibited in parenthesis.
Source: Ministry of Labor, NESDC, NSO, Krungsri Research

Within manufacturing sector, SMEs mostly employ the largest share of minimum-wage workers

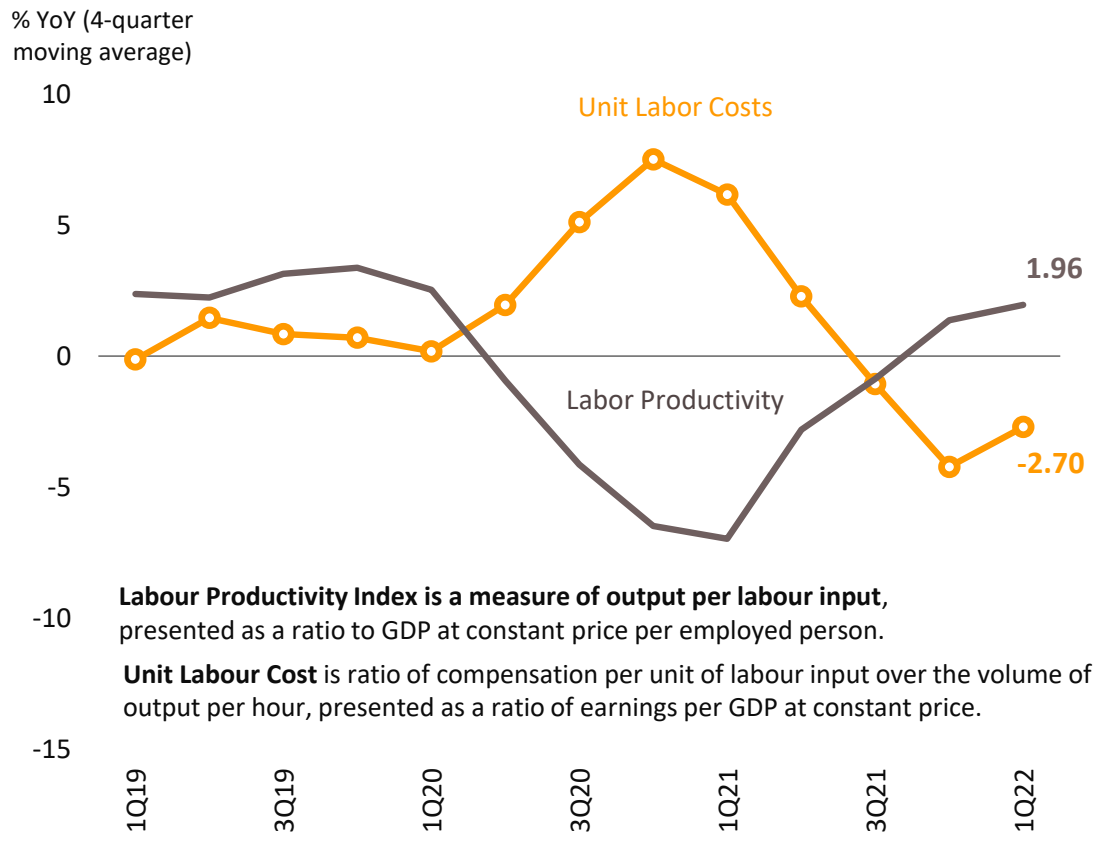
Within the manufacturing sector, only the Leather industry (0.4% of GDP) had more than 50% of minimum-wage workers within their workforce, especially large firms. In SMEs, minimum-wage workers in many industries accounted for more than 40-50% of employees, led by those in Wood (53%), Food (51%), Non-metallic (50%), Beverages (49%), Textiles (48%), and Rubber & Plastics (47%).



Note: Labor structure is based on Labor Force Survey data. % Share of sectoral GDP in total GDP is exhibited in parenthesis.
Source: Ministry of Labor, NESDC, NSO, Krungsri Research

Appropriate timing for wage hike?: It is time to hike wages as labor productivity has improved by 2% while unit labor cost has dropped by 2.7%

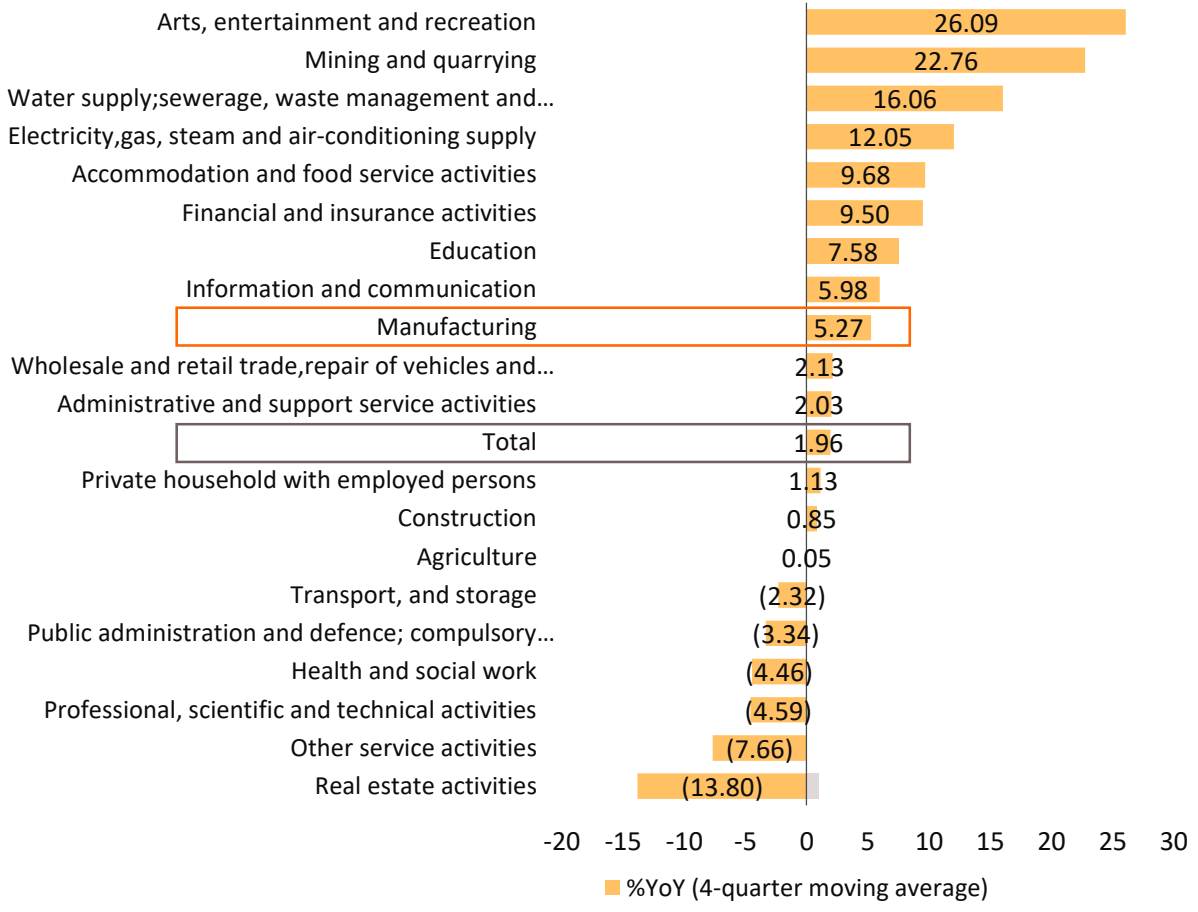
Labor productivity and unit labor costs



Labour Productivity Index is a measure of output per labour input, presented as a ratio to GDP at constant price per employed person.

Unit Labour Cost is ratio of compensation per unit of labour input over the volume of output per hour, presented as a ratio of earnings per GDP at constant price.

Labor productivity by sector as of 1Q22

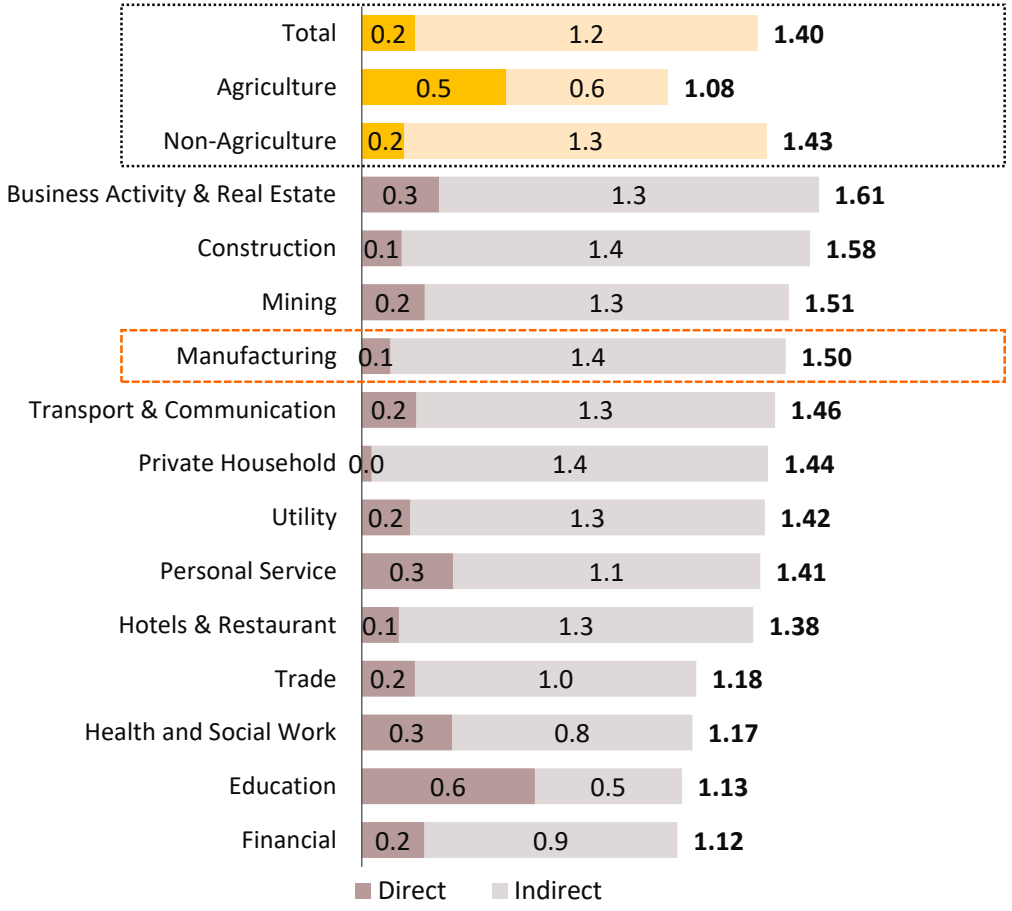


Note: Four-quarter moving average of year-over-year growth
Source: BOT, NSO, NESDC, Krungsri Research

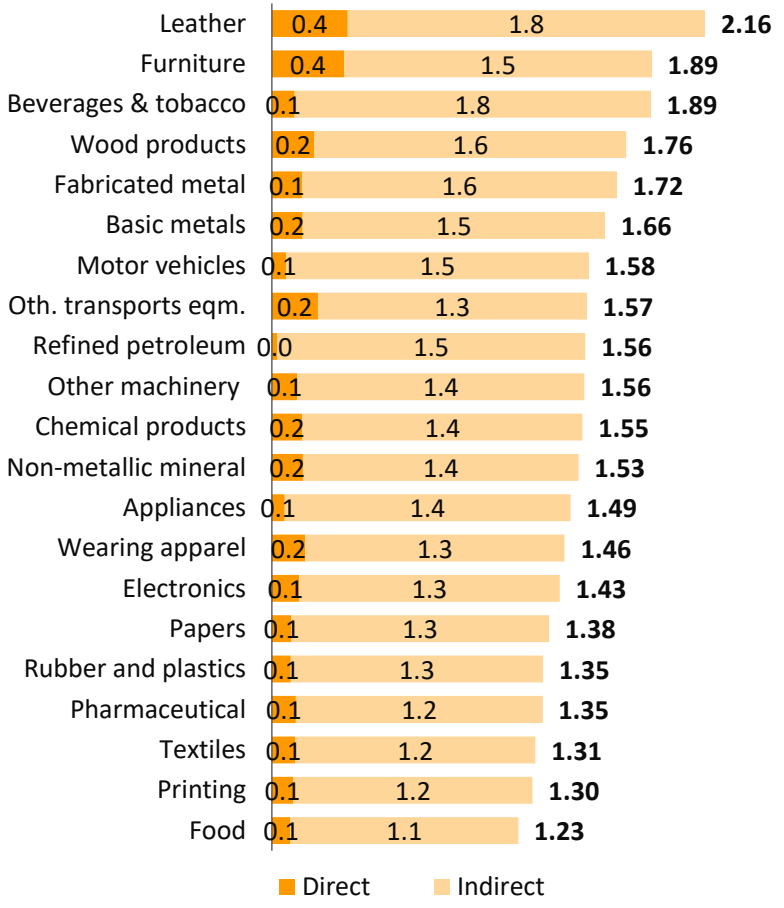
A 5% minimum wage hike would lift production costs by 1.4%, comprising 0.2% direct effect and 1.2% indirect effect

The most affected sectors would be business activity & real estate, construction, mining and manufacturing. Within the manufacturing sector, the increment would be highest for leather, furniture, beverage and wood products manufacturers.

Estimated increment in production cost due to minimum wage hike (%)



Estimated increment in production cost in manufacturing sector due to minimum wage hike (%)

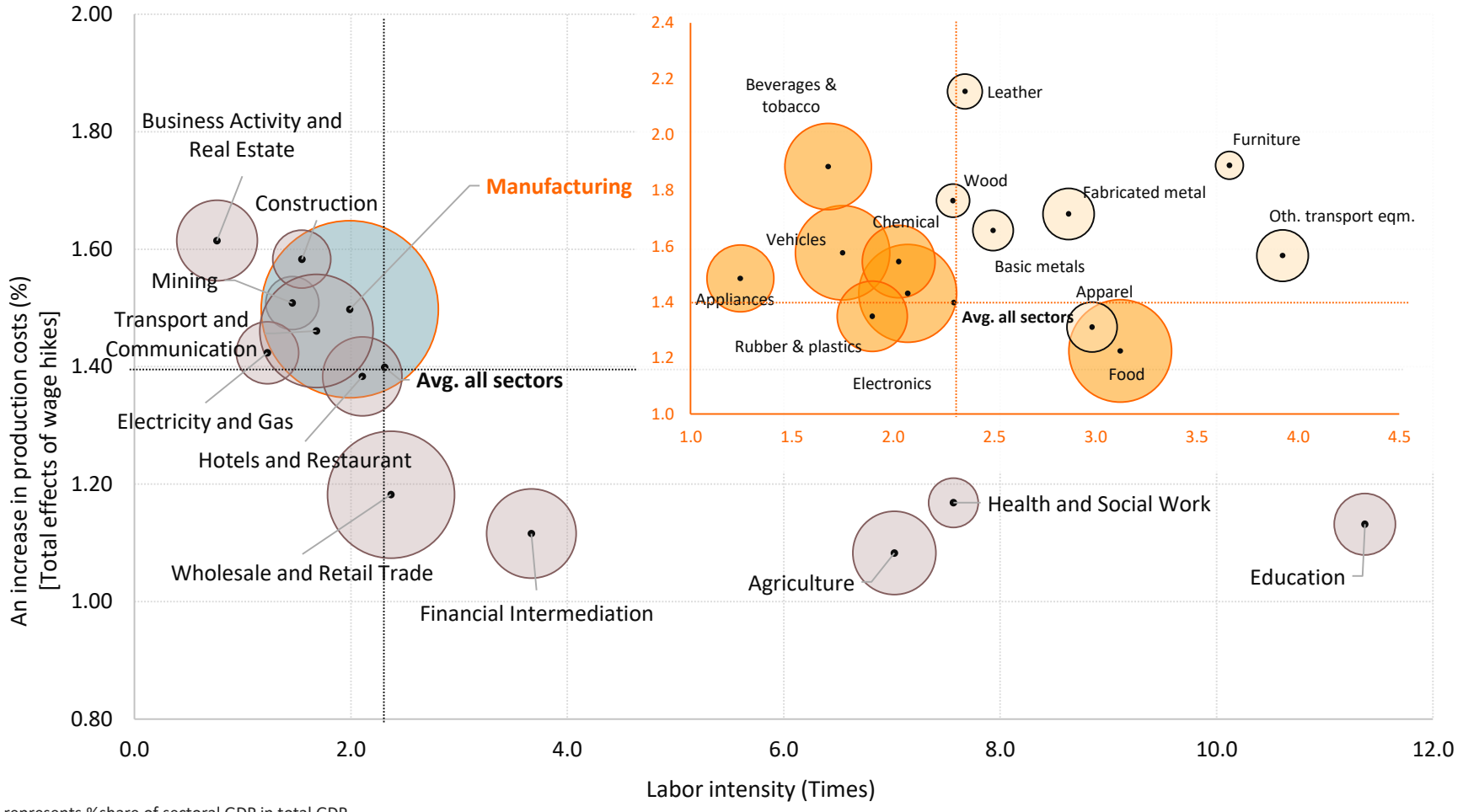


Note: Direct and indirect effects based on Input-Output model analysis
Source: Ministry of Labor, NESDC, Krungsri Research

Production costs would rise in labor-intensive sectors because of the minimum wage hike and would also rise overall due to higher input costs

The direct effect of wage hike on production costs would be much less than the indirect effect, which means the minimum wage hike would lift production costs not only in labor-intensive sectors but also other sectors as a result of higher input costs triggered by higher wages. For example, the chart below shows the wage hike would lift production costs in real estate and construction sectors more than in the agriculture and education sectors even though labor intensity in real estate and construction sectors is less than in the agriculture and education sectors.

Effect of wage hike on production costs by industry

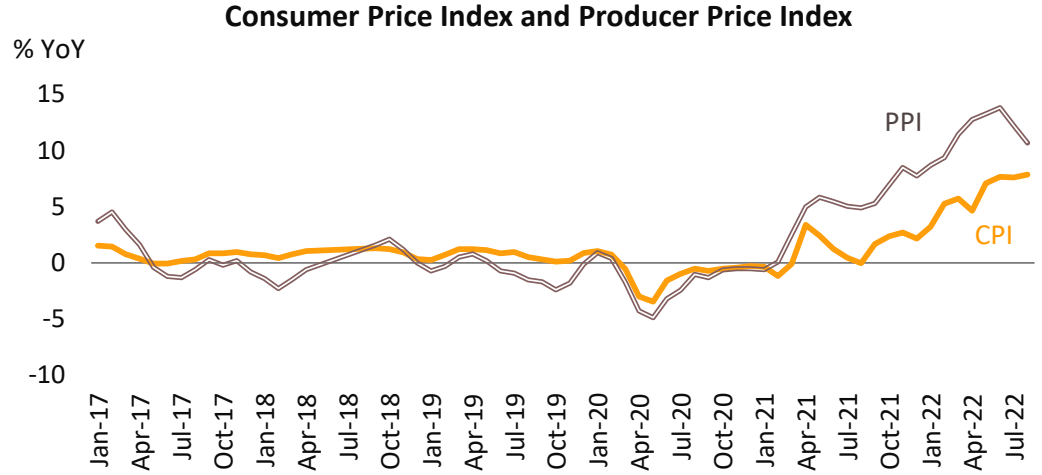


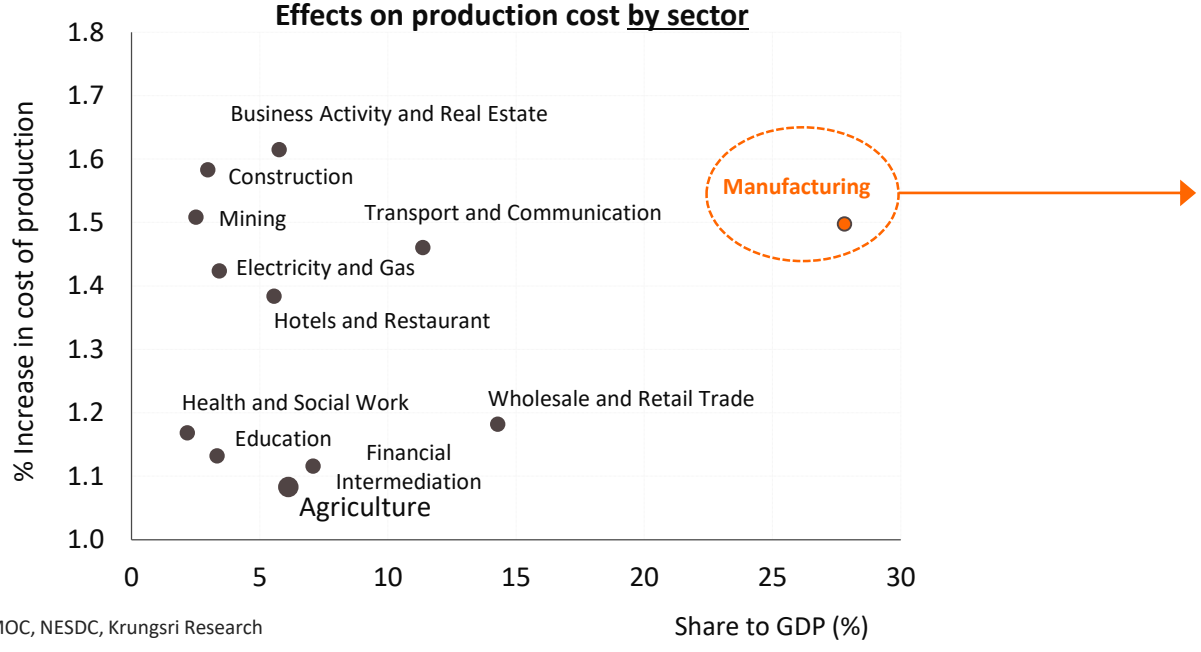
Note: Bubble size represents %share of sectoral GDP in total GDP.
Source: Ministry of Labor, NESDC, Krungsri Research

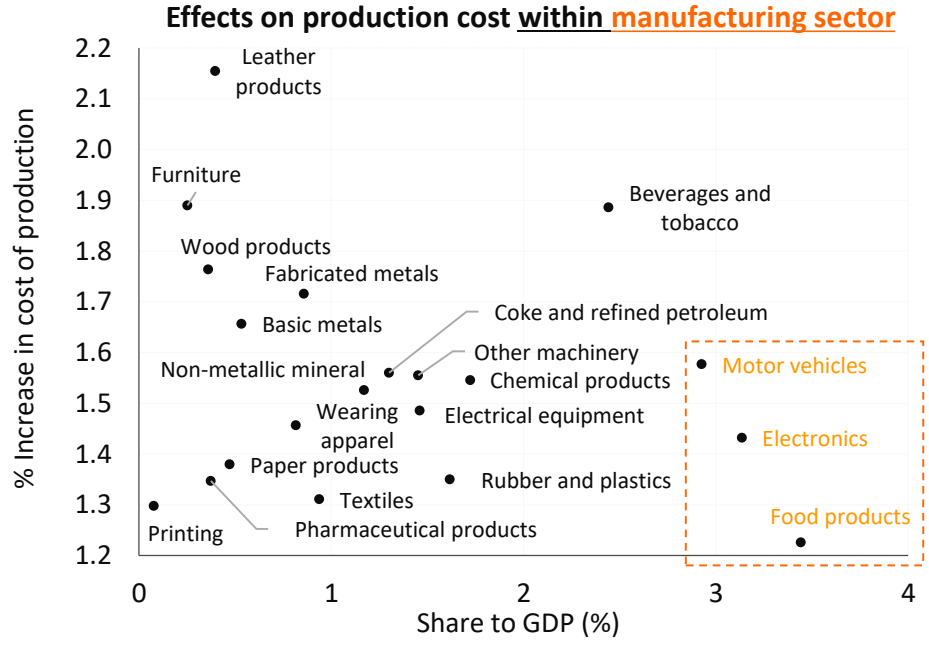
Higher inflation: Small industries would see larger increments in production costs; lift baseline inflation by 0.46%

Krungsri Research's view

- The effects of minimum wage hike on production costs would be transmitted mostly through manufacturing firms. However, large manufacturers, including those producing Motor Vehicle, Electronics, and Food products, would experience limited impact. The largest impact would be seen in small industries which account for less than 1% of GDP. **Based on the new minimum wage, a 1.4% increase in overall production cost would lift headline inflation by 0.46% (from baseline), implying a moderate impact on costs and inflation.**
- The government is considering measures to mitigate the impact of minimum wage hike on employers, including reducing their social security contribution by 2% for 3 months after the minimum wage hike takes effect.







Source: MOC, NESDC, Krungsri Research

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