

Hana Microelectronics PCL

(HANA.BK/HANA TB)*



SET ESG Rating of AA

Neutral - Maintained

| | |
|-------------------------------|-----------|
| Price as of 25 Dec 2023 | 53.50 |
| 12M target price (Bt/shr) | 47.00 |
| Unchanged/Revised up(down)(%) | Unchanged |
| Upside/downside (%) | (12.1) |

Key messages

แนวโน้มบวกของอุตสาหกรรมจะช่วยสร้างภาวะบวกให้กับราคาหุ้น HANA แต่ยังมีปัจจัยเฉพาะที่ซึ่งคงจับตาต่อไป เรายังคงคำแนะนำ “ถือ” HANA โดยประเมินราคาเป้าหมายสิ้นปี 2567 ที่ 47.00 บาท อิงจาก PER ที่ 17.0x (+0.25 S.D)

Trading data

| | | | |
|----------------------------|--------------|------|------|
| Mkt cap (Btmn/US\$m) | 47,810/1,195 | | |
| Outstanding shares (mn) | 885 | | |
| Foreign ownership (mn) | 432 | | |
| 3M avg. daily trading (mn) | 17 | | |
| 52-week trading range (Bt) | 36.3 – 65.3 | | |
| Performance (%) | 3M | 6M | 12M |
| Absolute | -9.6 | 23.4 | 5.4 |
| Relative | -2.1 | 32.3 | 21.3 |

Quarterly EPS

| EPS | Q1 | Q2 | Q3 | Q4 |
|------|------|------|------|-------|
| 2021 | 0.37 | 0.92 | 0.70 | -0.07 |
| 2022 | 0.45 | 0.30 | 0.52 | 1.34 |
| 2023 | 0.33 | 0.79 | 0.91 | |

Share price chart



Source: SET

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แนวโน้มอุตสาหกรรมเป็นบวก แต่ยังมีปัจจัยที่ต้องจับตา

Event

อัปเดตแนวโน้มของบริษัท

Impact

อุตสาหกรรมกำลังฟื้นตัว

จากข้อมูลของ Semiconductor Industry Association (SIA) ยอดขาย semiconductor ทั่วโลกอยู่ที่ 4.66 หมื่นล้านดอลลาร์ฯ ในเดือนตุลาคม 2566 เพิ่มขึ้น MoM ติดต่อกันเป็นเดือนที่แปด ส่งผลให้ยอดขาย semiconductor ทั่วโลกในงวด 10M66 อยู่ที่ 4.23 แสนล้านดอลลาร์ฯ (-14% YoY) ทั้งนี้ ยอดขายที่ดีขึ้นอย่างต่อเนื่องนี้อาจจะบ่งบอกถึงโมเมนตัมเชิงบวกของอุปสงค์ และ ชวยยืนยันแนวโน้มการกลับมาคงตัว (inventory restocking) ซึ่งจะช่วยสนับสนุนแนวโน้มอุตสาหกรรมตามมุมมองของผู้เชี่ยวชาญระดับโลก โดย World Semiconductor Trade Statistic (WSTS) ประเมินว่ายอดขาย semiconductor ทั่วโลกจะหดตัว 9.4% YoY ในปี 2566F ก่อนที่จะกลับมาโต 13.1% YoY ในปี 2567F

AI PCs จะช่วยหนุนอุปสงค์ PC

ตามบทวิเคราะห์ของ KGI Taiwan เรื่อง *IT Hardware: AI PC to enhance PC demand in 2H24-2025F* ที่เผยแพร่เมื่อวันที่ 19 ธันวาคม 2566 ทางทีมคาดว่ายอดขาย PC ทั่วโลกจะลดลงประมาณ 14-15% YoY ในปี 2566F เนื่องจากความกังวลเกี่ยวกับภาวะเศรษฐกิจ อย่างไรก็ตาม ยอดจัดส่งน่าจะพลิกกลับมาเป็นบวกที่ 6% YoY ในปี 2567F เนื่องจากคาดว่าจะมีอุปสงค์การซื้อเครื่องใหม่แทนเครื่องเก่ากลับมา และจะมีอุปสงค์สำหรับการอัปเดตเครื่องเพื่อให้ใช้งาน AI ได้ (คาดว่าอัตราการใช้งาน (penetration) AI PC ในปี 2567F จะอยู่ที่ 19% และเพิ่มเป็น 60% ในปี 2570F; Figure 3)

ยังมีปัจจัยเฉพาะบางประการที่ที่น่าเป็นห่วง

แนวโน้มของอุตสาหกรรมที่เป็นบวกน่าจะช่วยสนับสนุนยอดขายของ HANA เพราะประมาณ 50% ของรายได้รวมของ HANA มาจากสินค้าในหมวดที่กำลังฟื้นตัว โดยประมาณ 10% ของรายได้รวมมาจากกลุ่มคอมพิวเตอร์ และอีกประมาณ 40% มาจาก smartphone โดย smartphone คาดว่าจะโต 4% YoY ในปี 2567 อย่างไรก็ตาม ยังมีปัจจัยเฉพาะที่ที่น่าเป็นห่วงและต้องจับตาต่อไป อย่างเช่น อุปสงค์ที่แผ่วลงของอุปกรณ์ silicon จากการที่เศรษฐกิจจีนอ่อนแอ ส่งผลให้บริษัททบทวนเป้าหมายยอดขายในปี 2567F (จากเป้าเดิมที่ 45-48 ล้านดอลลาร์ฯ) และทำให้ถึงจุดคุ้มทุนในระดับ EBITDA ชลลงเป็น 2H67F (จากเดิมที่คาดว่าจะถึงใน 1H67F)

Valuation & action

เรายังคงคำแนะนำ “ถือ” HANA โดยประเมินราคาเป้าหมายสิ้นปี 2567 ที่ 47.00 บาท อิงจาก PER ที่ 17.0x (+0.25 S.D) เราแนะนำให้จับตาดูจังหวะการฟื้นตัวของยอดขายในช่วง 4Q66F-1Q67F ซึ่งจะเป็สาเหตุให้มีการ re-rate PER เพื่อตอบรับวัฏจักรขาขึ้นของอุตสาหกรรม

Risks

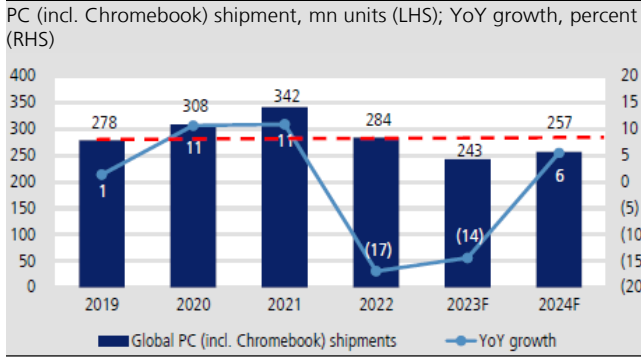
ภัยธรรมชาติ, มีการปิดโรงงานนอกแผน, ลูกค้าเปลี่ยนไปสั่งซื้อสินค้าจาก supplier รายอื่น, ขาดแคลนวัตถุดิบ, เงินบาทแข็งค่าขึ้น

Key financials and valuations

| Year end Dec 31 | Dec - 19A | Dec - 20A | Dec - 21A | Dec - 22A | Dec - 23F | Dec - 24F |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Revenue (Btmn) | 20,384 | 19,283 | 23,780 | 27,167 | 26,504 | 26,881 |
| Gross Profit (Btmn) | 2,357 | 2,548 | 3,287 | 3,661 | 3,644 | 3,746 |
| Net Profit (Btmn) | 1,805 | 1,908 | 1,545 | 2,078 | 2,289 | 2,461 |
| Normalized Profit (Btmn) | 1,523 | 1,796 | 2,272 | 2,396 | 2,372 | 2,461 |
| EPS (Bt) | 2.24 | 2.37 | 1.92 | 2.58 | 2.78 | 2.78 |
| Normalized EPS (Bt) | 1.89 | 2.23 | 2.82 | 2.98 | 2.88 | 2.78 |
| DPS (Bt) | 1.30 | 1.40 | 2.00 | 1.00 | 1.00 | 2.00 |
| EPS Growth (%) | (24.0) | 5.7 | (19.0) | 34.5 | 7.7 | (0.0) |
| Normalized EPS Growth | (35.4) | 17.9 | 26.6 | 5.4 | (3.2) | (3.6) |
| P/E (X) | 17.4 | 17.8 | 32.1 | 18.1 | 18.6 | 19.3 |
| P/B (X) | 1.3 | 1.5 | 3.2 | 1.8 | 1.6 | 1.5 |
| EV/EBITDA (X) | 11.2 | 12.1 | 13.8 | 11.0 | 6.4 | 6.0 |
| Net Debt to Equity (%) | (41.5) | (25.0) | (14.3) | (10.0) | (40.4) | (41.0) |
| Dividend Yield (%) | 3.9 | 3.5 | 2.2 | 1.9 | 1.9 | 3.7 |
| Return on Average Equity (%) | 8.7 | 9.1 | 6.9 | 8.9 | 8.5 | 8.1 |

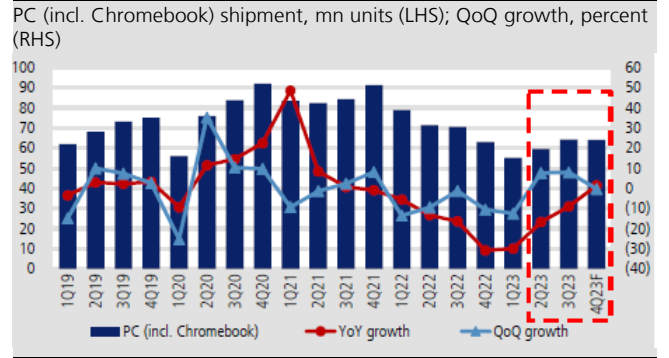
Source: Company data, KGI Securities Research

Figure 1: PC shipments to grow 6% YoY in 2024F



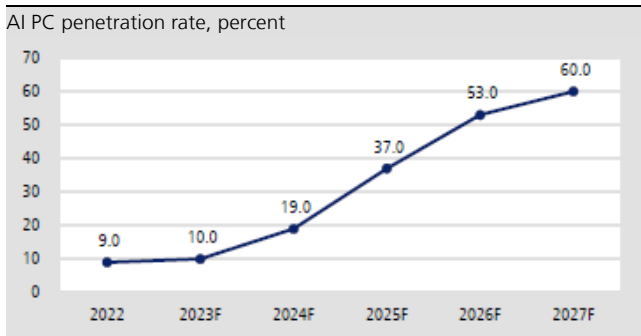
Source: Gartner, KGI Securities Research (Taiwan)

Figure 2: PC shipment YoY decline has narrowed since 202Q3



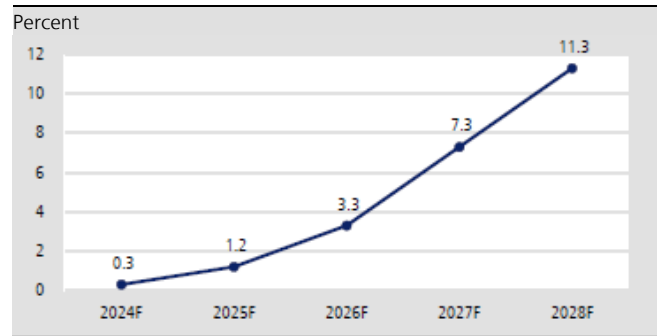
Source: Gartner, KGI Securities Research (Taiwan)

Figure 3: Canlys forecasts AI PC penetration of 60% by 2027



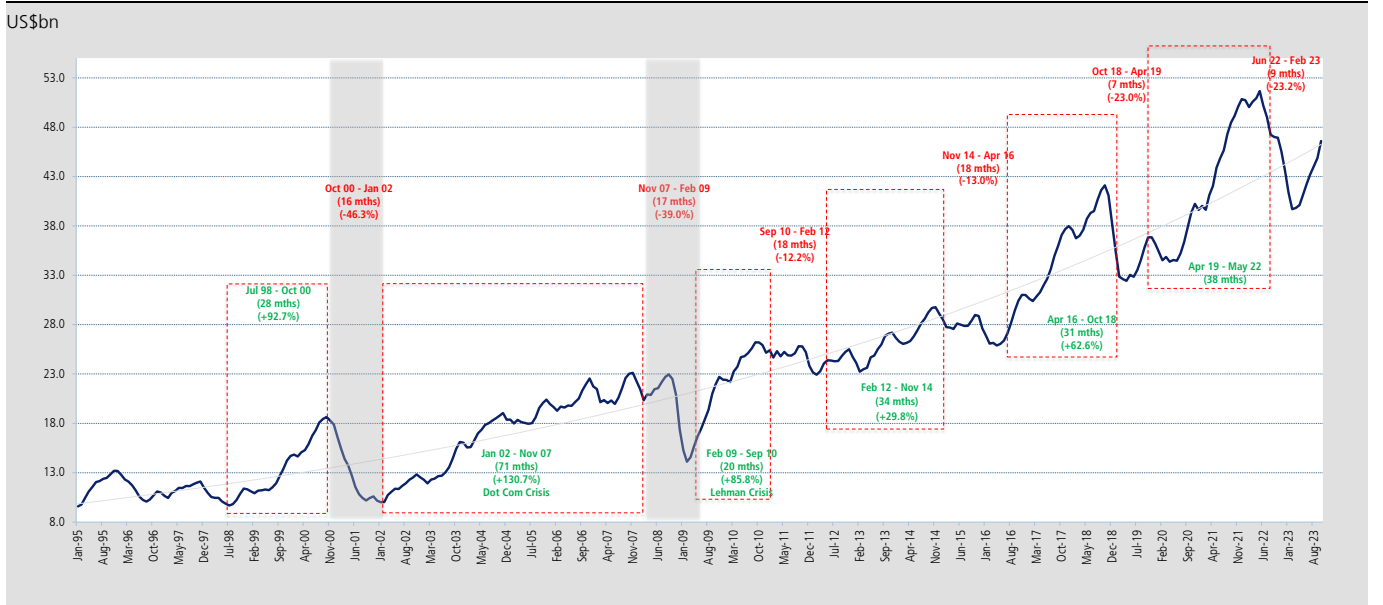
Source: Canlys, KGI Securities Research (Taiwan)

Figure 4: Omdia forecasts AI NB penetration at 7.3% by 2027 and over 10% by 2028

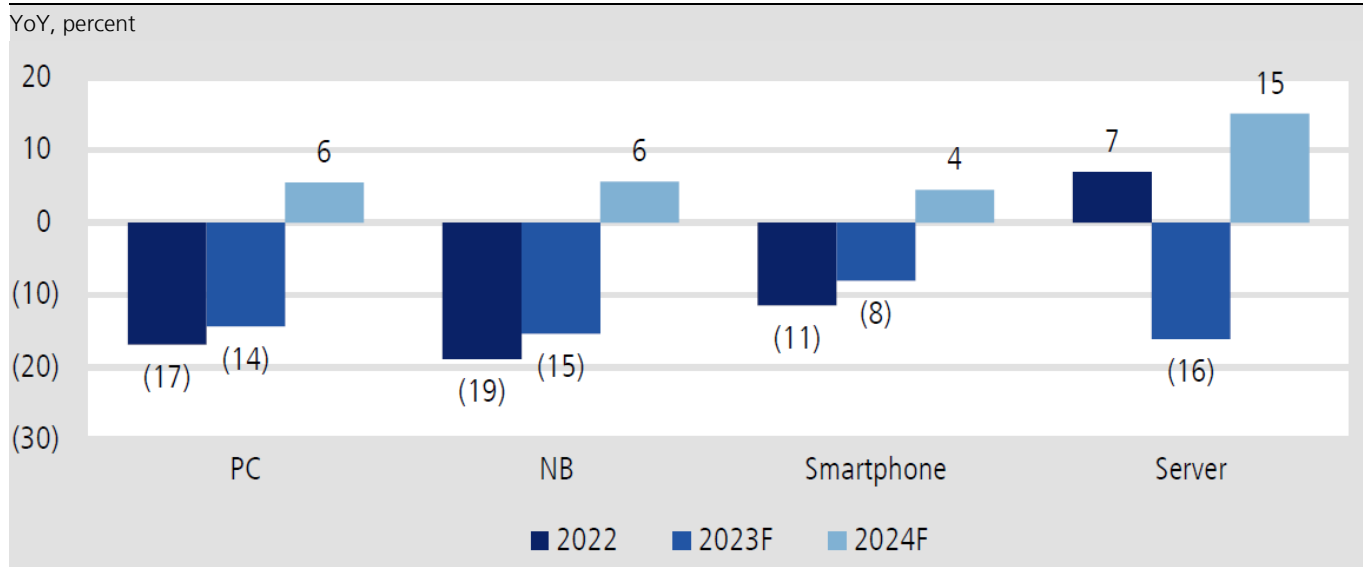


Source: Omdia, KGI Securities Research (Taiwan)

Figure 5: Global semiconductor sales



Source: KGI Securities Research

Figure 6: IT hardware devices – NB, PC, smartphone and server shipments to grow in 2024F


Source: Gartner, KGI Securities Research (Taiwan)

Figure 7: Key assumptions

| Assumption | Unit | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023F | 2024F |
|---------------|---------|-------|------|------|-------|-------|------|------|-------|-------|
| Sales | US\$m | 581 | 635 | 689 | 656 | 616 | 743 | 775 | 762 | 802 |
| Sales growth | Percent | (3.0) | 9.3 | 8.5 | (4.8) | (6.1) | 20.6 | 4.3 | (1.7) | 5.4 |
| GPM | Percent | 14.0 | 14.9 | 14.4 | 11.6 | 13.2 | 13.8 | 13.5 | 13.8 | 13.9 |
| Exchange rate | Bt/US\$ | 35.3 | 33.9 | 32.3 | 31.1 | 31.3 | 32.0 | 35.1 | 34.8 | 33.5 |

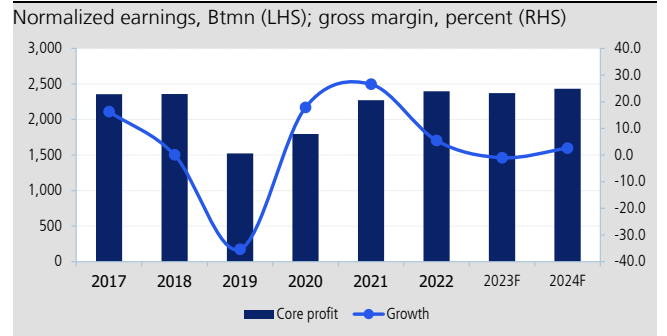
Source: KGI Securities Research

Figure 8: Company profile

Hana Group is one of Southeast Asia's leading independent electronics manufacturing service (EMS) producers. The company's headquarters are in Bangkok and there are six manufacturing facilities located in Lamphun and Ayutthaya provinces in Thailand, Jiaxing, China, Ohio, US, Koh Kong, Cambodia.

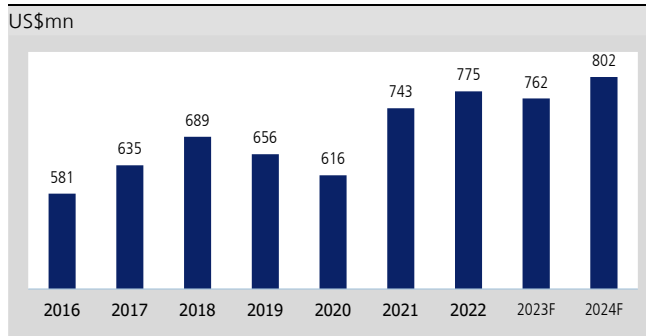
Source: Company data

Figure 9: Core profit



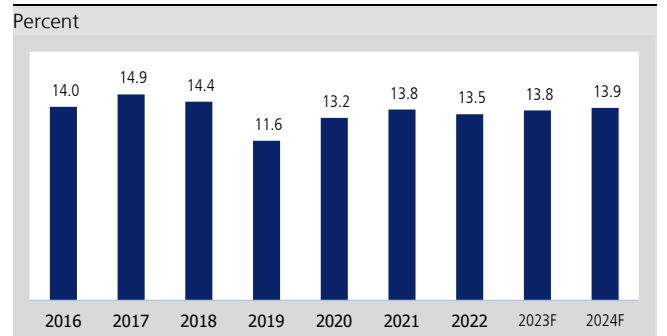
Source: Company data, KGI Securities Research

Figure 10: Sales assumption



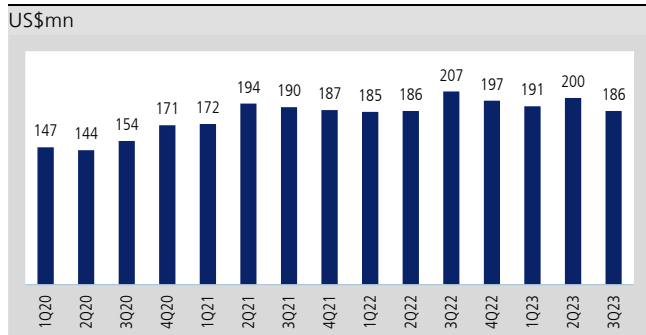
Source: Company data, KGI Securities Research

Figure 11: Gross margin



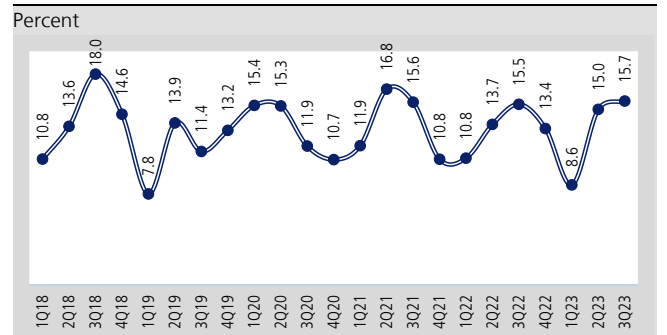
Source: Company data, KGI Securities Research

Figure 12: Sales quarterly



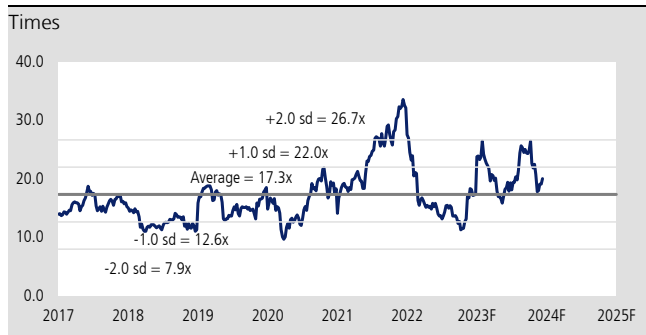
Source: Company data, KGI Securities Research

Figure 13: Gross margin quarterly



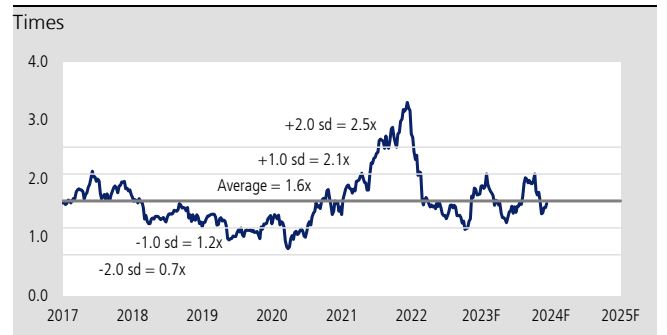
Source: Company data, KGI Securities Research

Figure 9: Company's PER



Source: KGI Securities Research

Figure 10: Company's PBV



Source: KGI Securities Research

Quarterly Income Statement

| | Mar-21A | Jun-21A | Sep-21A | Dec-21A | Mar-22A | Jun-22A | Sep-22A | Dec-22A | Mar-23A | Jun-23A | Sep-23A |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Income Statement (Bt mn) | | | | | | | | | | | |
| Revenue | 5,214 | 6,065 | 6,241 | 6,260 | 6,107 | 6,390 | 7,545 | 7,125 | 6,466 | 6,910 | 6,555 |
| Cost of Goods Sold | (4,593) | (5,048) | (5,265) | (5,587) | (5,445) | (5,512) | (6,378) | (6,171) | (5,913) | (5,871) | (5,523) |
| Gross Profit | 621 | 1,016 | 976 | 673 | 663 | 878 | 1,167 | 954 | 553 | 1,039 | 1,031 |
| Operating Expense | (312) | (373) | (376) | (362) | (381) | (401) | (408) | (505) | (382) | (392) | (449) |
| Other incomes | 77 | 117 | 95 | 66 | 108 | 120 | 109 | 119 | 120 | 123 | 116 |
| Operating Profit | 386 | 760 | 696 | 377 | 390 | 597 | 868 | 567 | 291 | 770 | 698 |
| Depreciation of fixed asset | (314) | (299) | (327) | (345) | (346) | (368) | (405) | (409) | (405) | (410) | (410) |
| Operating EBITDA | 700 | 1,059 | 1,023 | 722 | 736 | 965 | 1,273 | 976 | 696 | 1,179 | 1,109 |
| Non-Operating Income | 99 | (2) | (82) | (173) | 54 | (302) | (359) | 414 | 5 | 125 | 74 |
| Interest Income | 29 | 29 | 29 | 28 | 25 | 23 | 24 | 23 | 17 | 21 | 15 |
| Other Non-op Income | 69 | (32) | (111) | (201) | 29 | (326) | (384) | 391 | (12) | 104 | 60 |
| Non-Operating Expense | 179 | (0) | 25 | 244 | 61 | 29 | 40 | (137) | 14 | 210 | (17) |
| Interest Expense | (1) | (2) | (2) | (3) | (1) | (3) | (3) | (6) | (2) | (8) | (17) |
| Other Non-op Expense | 181 | 1 | 27 | 246 | 63 | 32 | 43 | (131) | 16 | 218 | 0 |
| Equity Income/(Loss) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pre-tax profit | 303 | 754 | 586 | (45) | 380 | 260 | 463 | 1,107 | 278 | 668 | 755 |
| Current Taxation | (2) | (18) | (22) | (11) | (15) | (15) | (46) | (31) | (12) | (33) | (21) |
| Minorities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Extraordinary items | | | | | | | | | | | |
| Net Profit | 301 | 737 | 564 | (56) | 365 | 245 | 417 | 1,075 | 266 | 635 | 734 |
| Normalized Profit | 413 | 770 | 701 | 391 | 399 | 603 | 843 | 553 | 295 | 750 | 674 |
| EPS (Bt) | 0.37 | 0.92 | 0.70 | (0.07) | 0.45 | 0.30 | 0.52 | 1.34 | 0.33 | 0.79 | 0.91 |
| Normalized EPS (Bt) | 0.51 | 0.96 | 0.87 | 0.49 | 0.50 | 0.75 | 1.05 | 0.69 | 0.37 | 0.93 | 0.84 |
| Margins | | | | | | | | | | | |
| Gross profit margin | 11.9 | 16.8 | 15.6 | 10.8 | 10.8 | 13.7 | 15.5 | 13.4 | 8.6 | 15.0 | 15.7 |
| Operating EBIT margin | 7.4 | 12.5 | 11.1 | 6.0 | 6.4 | 9.3 | 11.5 | 8.0 | 4.5 | 11.1 | 10.7 |
| Operating EBITDA margin | 13.4 | 17.5 | 16.4 | 11.5 | 12.1 | 15.1 | 16.9 | 13.7 | 10.8 | 17.1 | 16.9 |
| Net profit margin | 5.8 | 12.1 | 9.0 | (0.9) | 6.0 | 3.8 | 5.5 | 15.1 | 4.1 | 9.2 | 11.2 |
| Growth (YoY) | | | | | | | | | | | |
| Revenue growth | 13.1 | 32.1 | 29.7 | 18.9 | 17.1 | 5.4 | 20.9 | 13.8 | 5.9 | 8.1 | (13.1) |
| Operating EBIT growth | (16.1) | 60.4 | 89.9 | (11.2) | 1.0 | (21.4) | 24.8 | 50.6 | (25.3) | 28.9 | (19.6) |
| Operating EBITDA growth | (5.5) | 39.8 | 57.1 | (2.2) | 5.1 | (8.8) | 24.5 | 35.1 | (5.5) | 22.2 | (12.9) |
| Net profit growth | 48.1 | 8.1 | 76.6 | (107.9) | 21.2 | (66.8) | (26.1) | (2,005.7) | (27.0) | 159.4 | 76.1 |
| Normalized profit growth | (14.9) | 62.1 | 92.4 | (17.1) | (3.3) | (21.7) | 20.3 | 41.5 | (26.1) | 24.3 | (20.1) |

Source: Company data, KGI Securities Research

Balance Sheet

| As of 31 Dec (Bt mn) | 2020 | 2021 | 2022 | 2023F | 2024F |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Total Assets | 25,180 | 27,853 | 29,703 | 36,775 | 36,671 |
| Current Assets | 17,720 | 17,570 | 18,243 | 24,794 | 24,260 |
| Cash & ST Investment | 5,400 | 3,304 | 2,375 | 13,374 | 12,707 |
| Inventories | 4,496 | 6,857 | 9,457 | 5,637 | 5,705 |
| Account Receivable | 3,461 | 4,553 | 4,981 | 4,357 | 4,419 |
| Others | 4,363 | 2,856 | 1,431 | 1,426 | 1,429 |
| Non-current Assets | 7,460 | 10,283 | 11,460 | 11,981 | 12,412 |
| LT Investment | 72 | 72 | 72 | 72 | 72 |
| Net fixed Assets | 6,938 | 9,663 | 10,853 | 11,394 | 11,839 |
| Others | 450 | 548 | 534 | 515 | 500 |
| Total Liabilities | 3,567 | 4,795 | 5,841 | 6,921 | 5,685 |
| Current Liabilities | 2,806 | 4,029 | 5,027 | 5,853 | 4,606 |
| Account Payable | 2,355 | 3,506 | 4,161 | 3,758 | 3,803 |
| ST Borrowing | 0 | 0 | 0 | 1,300 | 0 |
| Others | 451 | 523 | 866 | 796 | 803 |
| Long-term Liabilities | 760 | 766 | 814 | 1,067 | 1,079 |
| Long-term Debts | 0 | 0 | 0 | 0 | 0 |
| Others | 760 | 766 | 814 | 1,067 | 1,079 |
| Shareholders' Equity | 21,614 | 23,058 | 23,862 | 29,854 | 30,986 |
| Common Stock | 805 | 805 | 805 | 885 | 885 |
| Capital Surplus | 1,723 | 1,723 | 1,723 | 6,231 | 6,231 |
| Retained Earnings | 19,240 | 19,344 | 20,234 | 21,638 | 22,771 |
| Preferred Stock | 0 | 0 | 0 | 0 | 0 |

Source: KGI Securities Research

Key Ratios

| Year to 31 Dec | 2020 | 2021 | 2022 | 2023F | 2024F |
|----------------------------------|---------|---------|---------|----------|----------|
| Growth (%YoY) | | | | | |
| Sales | (5.4) | 23.3 | 14.2 | (2.4) | 1.4 |
| OP | 18.1 | 28.6 | 9.2 | 0.1 | 2.4 |
| EBITDA | 1.1 | (7.9) | 28.9 | 31.3 | 4.8 |
| NP | 5.7 | (19.0) | 34.5 | 10.1 | 7.5 |
| Normalized Profit | 17.9 | 26.6 | 5.4 | (1.0) | 3.7 |
| EPS | 5.7 | (19.0) | 34.5 | 8.2 | (0.6) |
| Normalized EPS | 17.9 | 26.6 | 5.4 | (2.6) | (4.1) |
| Profitability (%) | | | | | |
| Gross Margin | 13.2 | 13.8 | 13.5 | 13.8 | 13.9 |
| Operating Margin | 8.9 | 9.3 | 8.9 | 9.2 | 9.2 |
| EBITDA Margin | 16.3 | 12.2 | 13.7 | 18.5 | 19.1 |
| Net Margin | 9.9 | 6.5 | 7.7 | 8.6 | 9.2 |
| ROAA | 7.7 | 5.8 | 7.2 | 6.9 | 6.7 |
| ROAE | 9.1 | 6.9 | 8.9 | 8.5 | 8.1 |
| Stability | | | | | |
| Gross Debt/Equity (%) | 16.5 | 20.8 | 24.5 | 23.2 | 18.3 |
| Net Debt/Equity (%) | (25.0) | (14.3) | (10.0) | (40.4) | (41.0) |
| Interest Coverage (x) | 218.1 | 214.3 | 175.7 | 49.6 | 215.1 |
| Interest & ST Debt Coverage (x) | 218.1 | 214.3 | 175.7 | 1.8 | 215.1 |
| Cash Flow Interest Coverage (x) | (113.9) | 277.9 | 222.4 | 177.3 | 413.2 |
| Cash Flow/Interest & ST Debt (x) | (113.9) | 277.9 | 222.4 | 6.5 | 413.2 |
| Current Ratio (x) | 6.3 | 4.4 | 3.6 | 4.2 | 5.3 |
| Quick Ratio (x) | 4.7 | 2.7 | 1.7 | 3.3 | 4.0 |
| Net Debt (Bt mn) | (5,400) | (3,304) | (2,375) | (12,074) | (12,707) |
| Per Share Data (Bt) | | | | | |
| EPS | 2.4 | 1.9 | 2.6 | 2.8 | 2.8 |
| Normalized EPS | 2.2 | 2.8 | 3.0 | 2.9 | 2.8 |
| CFPS | (1.3) | 2.6 | 3.5 | 9.8 | 5.6 |
| BVPS | 26.9 | 28.6 | 29.6 | 33.7 | 35.0 |
| SPS | 24.0 | 29.5 | 33.8 | 29.9 | 30.4 |
| EBITDA/Share | 3.9 | 3.6 | 4.6 | 5.5 | 5.8 |
| DPS | 1.4 | 2.0 | 1.0 | 1.0 | 2.0 |

Source: KGI Securities Research

Profit & Loss

| Year to Dec 31 (Btmn) | 2020 | 2021 | 2022 | 2023F | 2024F |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Revenue | 19,283 | 23,780 | 27,167 | 26,504 | 26,881 |
| Cost of Goods Sold | (16,734) | (20,493) | (23,506) | (22,860) | (23,135) |
| Gross Profit | 2,548 | 3,287 | 3,661 | 3,644 | 3,746 |
| Operating Expenses | (1,211) | (1,423) | (1,695) | (1,723) | (1,774) |
| Other Incomes | 249 | 241 | 362 | 412 | 418 |
| Operating Profit | 1,725 | 2,219 | 2,422 | 2,425 | 2,482 |
| Depreciation of fixed assets | (1,162) | (1,285) | (1,528) | (2,459) | (2,555) |
| Operating EBITDA | 3,139 | 2,891 | 3,726 | 4,893 | 5,130 |
| Non-Operating Income | 277 | (158) | (224) | 243 | 93 |
| Interest Income | 140 | 114 | 94 | 91 | 93 |
| Other Non-op Income | 138 | (272) | (318) | 152 | 0 |
| Non-Operating Expense | 16 | 448 | (13) | 185 | (12) |
| Interest Expense | (9) | (7) | (13) | (49) | (12) |
| Other Non-op Expense | 26 | 455 | 0 | 234 | 0 |
| Equity Income/(Loss) | 0 | 0 | 0 | 0 | 0 |
| Pre-tax Profit | 1,968 | 1,598 | 2,186 | 2,385 | 2,563 |
| Current Taxation | (60) | (53) | (107) | (95) | (103) |
| Minorities | 0 | 0 | 0 | 0 | 0 |
| Extraordinaries items | 10 | 2 | 2 | 185 | 0 |
| Net Profit | 1,908 | 1,545 | 2,078 | 2,289 | 2,461 |
| Normalized Profit | 1,796 | 2,272 | 2,396 | 2,372 | 2,461 |
| EPS (Bt) | 2.37 | 1.92 | 2.58 | 2.80 | 2.78 |
| Normalized EPS (Bt) | 2.23 | 2.82 | 2.98 | 2.90 | 2.78 |

Source: KGI Securities Research

Cash Flow

| Year to 31 Dec (Bt mn) | 2020 | 2021 | 2022 | 2023F | 2024F |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Operating Cash Flow | (1,032) | 2,082 | 2,782 | 8,707 | 4,946 |
| Net Profit | 1,908 | 1,545 | 2,078 | 2,289 | 2,461 |
| Depreciation & Amortization | 1,162 | 1,285 | 1,528 | 2,459 | 2,555 |
| Change in Working Capital | (4,102) | (749) | (825) | 3,958 | (70) |
| Others | | | | | |
| Investment Cash Flow | 2,319 | (4,069) | (2,700) | (2,983) | (2,984) |
| Net CAPEX | (1,199) | (4,010) | (2,719) | (3,000) | (3,000) |
| Change in LT Investment | 3,719 | 0 | 0 | 0 | 0 |
| Change in Other Assets | (201) | (60) | 19 | 17 | 16 |
| Free Cash Flow | 1,286 | (1,987) | 81 | 5,723 | 1,962 |
| Financing Cash Flow | (1,321) | (109) | (1,011) | 5,276 | (2,628) |
| Change in Share Capital | 0 | 0 | 0 | 80 | 0 |
| Net Change in Debt | (481) | (8) | 263 | 1,573 | (1,300) |
| Change in Other LT Liab. | (840) | (101) | (1,274) | 3,622 | (1,328) |
| Net Cash Flow | (35) | (2,096) | (929) | 10,999 | (666) |

Source: KGI Securities Research

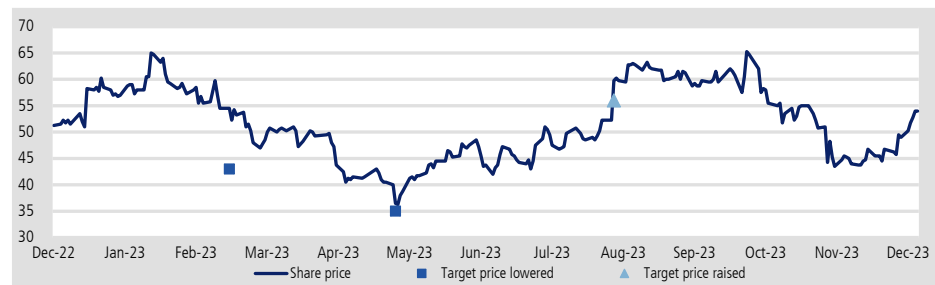
Rates of Return on Invested Capital

| Year | 1 - $\frac{\text{COGS}}{\text{Revenue}}$ | + $\frac{\text{Depreciation}}{\text{Revenue}}$ | + $\frac{\text{Operating Exp.}}{\text{Revenue}}$ | = | Operating Margin |
|-------|--|--|--|---|------------------|
| 2020 | 86.8% | 6.0% | 8.3% | | -1.1% |
| 2021 | 86.2% | 5.4% | 7.5% | | 0.9% |
| 2022 | 86.5% | 5.6% | 7.9% | | -0.1% |
| 2023F | 86.2% | 9.3% | 8.4% | | -3.9% |
| 2024F | 86.1% | 9.5% | 8.5% | | -4.1% |

| Year | 1/ $\frac{\text{Working Capital}}{\text{Revenue}}$ | + $\frac{\text{Net PPE}}{\text{Revenue}}$ | + $\frac{\text{Other Assets}}{\text{Revenue}}$ | = | Capital Turnover |
|-------|--|---|--|---|------------------|
| 2020 | (0.2) | 0.4 | 0.9 | | 0.9 |
| 2021 | (0.0) | 0.4 | 0.8 | | 0.9 |
| 2022 | (0.0) | 0.4 | 0.7 | | 0.9 |
| 2023F | (0.0) | 0.4 | 0.7 | | 0.9 |
| 2024F | 0.1 | 0.4 | 1.0 | | 0.7 |

| Year | Operating Margin | x | Capital Turnover | x | Cash Tax Rate | = | After-tax Return on Inv. Capital |
|-------|------------------|---|------------------|---|---------------|---|----------------------------------|
| 2020 | -1.1% | | 0.9 | | 3.1% | | 0.0% |
| 2021 | 0.9% | | 0.9 | | 3.3% | | 0.0% |
| 2022 | -0.1% | | 0.9 | | 4.9% | | 0.0% |
| 2023F | -3.9% | | 0.9 | | 4.9% | | -0.2% |
| 2024F | -4.1% | | 0.7 | | 4.0% | | -0.1% |

Source: KGI Securities Research

Hana Microelectronics PCL - Recommendation & target price history


| Date | Rating | Target | Price |
|-----------|--------------|--------|-------|
| 16-Aug-23 | Neutral | 56.00 | 59.75 |
| 16-May-23 | Underperform | 35.00 | 36.50 |
| 7-Mar-23 | Underperform | 43.00 | 54.50 |

Source: KGI Securities Research

Company's ESG details

Environment

- The Company joined the government sector in signing a Memorandum of Understanding Ceremony for reducing or banning foam food. The Company has further enhanced the project "HANA NO PLASTIC PROGRAM" along with awareness raising and communication campaign including training provided to all employees to reduce plastic consumption such as plastic cups, plastic bags and switch to use reusable cups/bags/bottles to promote a healthy and safe environment.
- The Company and Lamphun Provincial Office of Labor Protection and Welfare along with the Industrial Estate Authority of Thailand Lamphun Province joined the activity to build natural dam according to the Royal Initiative Project.

Social

- Scholarship program with the aim to enhance educational opportunities for the children of low-income employees, internship program for students to promote practical learning and knowledge to enhance the skills necessary for future careers by ensuring application and training provided equally to all women and men.
- Hana recognizes the importance of education and career exploration for college and undergraduate students. Our internship program gives students the opportunity to apply knowledge from their fields of study and gain real work experience in preparation for future work.

Governance

- HANA has been ranked 5 stars or "Excellent" in Corporate Governance Rating (CGR) honored by the Thai Institute of Directors Association (IOD).
- HANA has been granted 2021 ASEAN CG scorecard assessment, initiated by the ASEAN Capitals Market Forum (ACMF) with the support of the regulators in ASEAN.
- HANA has been selected as member of Thailand Sustainability Investment (THIS) for the year 2022, in recognizing our continuous and outstanding achievements in corporate sustainability thereby benefitting the environment and society.
- HANA has been ranked among the top 100 publicly listed companies that are most outstanding in terms of Environment, Social and Governance performance or ESG 100, assessed by Thaipat Institute.

Climate Management (Being the subset of Environment)

- Continuously improvement the efficiently use of internal resources within the organization, implement renewable energy project to drive a low-carbon society as part of climate change mitigation.
- Solar panels were installed on the roofs of three factories of Hana in Lamphun and Ayutthaya provinces in 2020.

Source: Company data, KGI Securities Research

SET ESG Ratings

| Stock | Company name | SET ESG Ratings | Stock | Company name | SET ESG Ratings |
|---------------|-------------------------------------|-----------------|--------------|--|-----------------|
| ADVANC | ADVANCED INFO SERVICE | AAA | KTC | KRUNGTHAI CARD | AAA |
| AMATA | AMATA CORPORATION | AAA | LH | LAND AND HOUSES | A |
| AOT | AIRPORTS OF THAILAND | A | MAJOR | MAJOR CINEPLEX GROUP | AA |
| AP | AP (THAILAND) | AA | MEGA | MEGA LIFESCIENCES | A |
| BAFS | BANGKOK AVIATION FUEL SERVICES PCL. | AA | MINT | MINOR INTERNATIONAL | AA |
| BAM | BANGKOK COMMERCIAL ASSET MANAGEMEN | AA | MTC | MUANGTHAI CAPITAL | A |
| BANPU | BANPU | AAA | OR | PTT OIL AND RETAIL BUSINESS | AAA |
| BBGI | BBGI | AA | ORI | ORIGIN PROPERTY | AA |
| BBL | BANGKOK BANK | AA | OSP | OSOTSPA | AA |
| BCH | BANGKOK CHAIN HOSPITAL | AA | PLANB | PLAN B MEDIA | AA |
| BCP | BANGCHAK CORPORATION | AAA | PSH | PRUKSA HOLDING | BBB |
| BCPG | BCPG | AA | PTT | PTT | AAA |
| BDMS | BANGKOK DUSIT MEDICAL SERVICES | AA | PTTEP | PTT EXPLORATION AND PRODUCTION | AAA |
| BEM | BANGKOK EXPRESSWAY AND METRO | AA | PTTGC | PTT GLOBAL CHEMICAL | AAA |
| BGRIM | B.GRIMM POWER | AAA | RATCH | RATCH GROUP | AA |
| BPP | BANPU POWER | AAA | RBF | R&B FOOD SUPPLY | BBB |
| BTS | BTS GROUP HOLDINGS | AA | SAK | SAKSIAM LEASING | A |
| CBG | CARABAO GROUP | A | SAPPE | SAPPE | BBB |
| CENTEL | CENTRAL PLAZA HOTEL | A | SAT | SOMBOON ADVANCE TECHNOLOGY | AA |
| CK | CH. KARNCHANG | A | SAWAD | SRISAWAD CORPORATION | BBB |
| CKP | CK POWER | AAA | SCB | SCB X | AA |
| COM7 | COM7 | A | SCC | THE SIAM CEMENT | AAA |
| CPALL | CP ALL | AAA | SCCC | SIAM CITY CEMENT | AA |
| CPAXT | CP AXTRA | AAA | SCGP | SCG PACKAGING | AAA |
| CPF | CHAROEN POKPHAND FOODS | AAA | SHR | S HOTELS AND RESORTS | A |
| CPN | CENTRAL PATTANA | AA | SICT | SILICON CRAFT TECHNOLOGY | A |
| EGCO | ELECTRICITY GENERATING | AA | SMPC | SAHAMITR PRESSURE CONTAINER | AA |
| ERW | THE ERWAN GROUP | A | SNC | SNC FORMER | A |
| GFPT | GFPT | BBB | SPALI | SUPALAI | AA |
| GLOBAL | SIAM GLOBAL HOUSE | AA | STEC | SINO-THAI ENGINEERING AND CONSTRUCTION | A |
| GPSC | GLOBAL POWER SYNERGY | AA | STGT | SRI TRANG GLOVES (THAILAND) | AAA |
| GULF | GULF ENERGY DEVELOPMENT | AA | TCAP | THANACHART CAPITAL | A |
| HANA | HANA MICROELECTRONICS | AA | TFG | THAIFOODS GROUP | A |
| HENG | HENG LEASING AND CAPITAL | A | THCOM | THAICOM | AAA |
| HMPRO | HOME PRODUCT CENTER | AA | TISCO | TISCO FINANCIAL GROUP | AAA |
| INTUCH | INTOUCH HOLDINGS | AA | TOP | THAI OIL | AAA |
| IRPC | IRPC | AA | TTB | TMBTHANACHART BANK | AA |
| IVL | INDORAMA VENTURES | AA | UBE | UBON BIO ETHANOL | A |
| KBANK | KASIKORNBANK | AAA | VGI | VGI | AA |
| KEX | KERRY EXPRESS (THAILAND) | BBB | WHA | WHA CORPORATION | AAA |
| KKP | KIATNAKIN PHATRA BANK | BBB | WHAUP | WHA UTILITIES AND POWER | AAA |
| KTB | KRUNG THAI BANK | AAA | ZEN | ZEN CORPORATION GROUP | AA |

Source: www.setsustainability.com

Disclaimer: The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by the relevant institution as disclosed by the Office of the Securities and Exchange Commission, is made in order to comply with the policy and sustainable development plan for the listed companies. The relevant institution made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, KGI Securities (Thailand) Public Company Limited (KGI) does not confirm, verify, or certify the accuracy and completeness of the assessment result.

Corporate Governance Report of Thai Listed Companies



Companies with Excellent CG Scoring

| Stock | Company name | Stock | Company name | Stock | Company name |
|--------|-------------------------------------|--------|--------------------------------|--------|--|
| AAV | ASIA AVIATION | GLOBAL | SIAM GLOBAL HOUSE | RATCH | RATCH GROUP |
| ADVANC | ADVANCED INFO SERVICE | GPSC | GLOBAL POWER SYNERGY | RBF | R&B FOOD SUPPLY |
| AMA | AMA MARINE | GULF | GULF ENERGY DEVELOPMENT | SAT | SOMBOON ADVANCE TECHNOLOGY |
| AMATA | AMATA CORPORATION | HANA | HANA MICROELECTRONICS | SCB | SCB X |
| ANAN | ANANDA DEVELOPMENT | HENG | HENG LEASING AND CAPITAL | SCC | THE SIAM CEMENT |
| AOT | AIRPORTS OF THAILAND | HMPRO | HOME PRODUCT CENTER | SCCC | SIAM CITY CEMENT |
| AP | AP (THAILAND) | INTUCH | INTOUCH HOLDINGS | SCGP | SCG PACKAGING |
| BAFS | BANGKOK AVIATION FUEL SERVICES PCL. | IRPC | IRPC | SEAFCO | SEAFCO |
| BAM | BANGKOK COMMERCIAL ASSET MANAGEMENT | IVL | INDORAMA VENTURES | SHR | S HOTELS AND RESORTS |
| BANPU | BANPU | KBANK | KASIKORN BANK | SICT | SILICON CRAFT TECHNOLOGY |
| BBL | BANGKOK BANK | KCE | KCE ELECTRONICS | SMPC | SAHAMITR PRESSURE CONTAINER |
| BCP | BANGCHAK CORPORATION | KEX | KERRY EXPRESS (THAILAND) | SNC | SNC FORMER |
| BCPG | BCPG | KKP | KIATNAKIN PHATRA BANK | SPALI | SUPALAI |
| BDMS | BANGKOK DUSIT MEDICAL SERVICES | KTB | KRUNG THAI BANK | SPRC | STAR PETROLEUM REFINING |
| BEM | BANGKOK EXPRESSWAY AND METRO | KTC | KRUNGTHAI CARD | STEC | SINO-THAI ENGINEERING AND CONSTRUCTION |
| BGRIM | B.GRIMM POWER | LPN | L.P.N. DEVELOPMENT | STGT | SRI TRANG GLOVES (THAILAND) |
| BPP | BANPU POWER | MAJOR | MAJOR CINEPLEX GROUP | SUN | SUNSWEEP |
| BTS | BTS GROUP HOLDINGS | MBK | MBK | SVI | SVI |
| CENTEL | CENTRAL PLAZA HOTEL | MINT | MINOR INTERNATIONAL | TACC | T.A.C. CONSUMER |
| CK | CH. KARNCHANG | MTC | MUANGTHAI CAPITAL | TCAP | THANACHART CAPITAL |
| CKP | CK POWER | OR | PTT OIL AND RETAIL BUSINESS | THCOM | THAICOM |
| COM7 | COM7 | ORI | ORIGIN PROPERTY | TISCO | TISCO FINANCIAL GROUP |
| CPALL | CP ALL | OSP | OSOTSPA | TKN | TAOKAENOI FOOD & MARKETING |
| CPAXT | CP AXTRA | PLANB | PLAN B MEDIA | TOP | THAI OIL |
| CPF | CHAROEN POKPHAND FOODS | PSH | PRUKSA HOLDING | TTB | TMBTHANACHART BANK |
| CPN | CENTRAL PATTANA | PTG | PTG ENERGY | TU | THAI UNION GROUP |
| DELTA | DELTA ELECTRONICS (THAILAND) | PTT | PTT | VGI | VGI |
| DOHOM | DOHOME | PTTEP | PTT EXPLORATION AND PRODUCTION | WHA | WHA CORPORATION |
| EGCO | ELECTRICITY GENERATING | PTTGC | PTT GLOBAL CHEMICAL | WHAUP | WHA UTILITIES AND POWER |
| GFPT | GFPT | PYLON | PYLON | ZEN | ZEN CORPORATION GROUP |
| GGC | GLOBAL GREEN CHEMICALS | QH | QUALITY HOUSES | | |



Companies with Very Good CG Scoring

| Stock | Company name | Stock | Company name | Stock | Company name |
|--------|------------------------------|--------|----------------------|--------|-----------------------|
| AEONTS | AEON THANA SINSAP (THAILAND) | JMT | JMT NETWORK SERVICES | SFT | SHRINKFLEX (THAILAND) |
| BCH | BANGKOK CHAIN HOSPITAL | LH | LAND AND HOUSES | SINGER | SINGER THAILAND |
| BEC | BEC WORLD | M | MK RESTAURANT GROUP | SMD | SAINTMED |
| BH | BUMRUNGRAD HOSPITAL | MEGA | MEGA LIFESCIENCES | SNNP | SRINANAPORN MARKETING |
| CBG | CARABAO GROUP | NETBAY | NETBAY | SPA | SIAM WELLNESS GROUP |
| CHG | CHULARAT HOSPITAL | PJW | PANJAWATTANA PLASTIC | TFG | THAIFOODS GROUP |
| ERW | THE ERAWAN GROUP | SAK | SAKSIAM LEASING | TIDLOR | NGERN TID LOR |
| ESSO | ESSO (THAILAND) | SAPPE | SAPPE | TNP | THANAPIRIYA |
| HUMAN | HUMANICA | SAWAD | SRISAWAD CORPORATION | UBE | UBON BIO ETHANOL |
| IIG | I&I GROUP | SFLEX | STARFLEX | XO | EXOTIC FOOD |



Companies with Good CG Scoring

| Stock | Company name | Stock | Company name | Stock | Company name |
|-------|------------------------|-------|--------------------------|-------|-------------------|
| AU | AFTER YOU | LPH | LADPRAO GENERAL HOSPITAL | TPCH | TPC POWER HOLDING |
| EKH | EKACHAI MEDICAL CARE | MENA | MENA TRANSPORT | | |
| JMART | JAYMART GROUP HOLDINGS | SISB | SISB | | |

Companies classified Not in the three highest score groups

| Stock | Company name | Stock | Company name | Stock | Company name |
|-------|--------------------|-------|------------------------|-------|-----------------------|
| BBGI | BBGI | NTSC | Nutrition SC | TGE | THACHANG GREEN ENERGY |
| BTG | BETAGRO | PLT | Pilatus Marine | | |
| ITC | i-Tail Corporation | PQS | Premier Quality Starch | | |

Source: www.thai-iod.com

Disclaimer: The disclosure of the survey result of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an assessment of operation and is not based on inside information. The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey result may be changed after that date or when there is any change to the relevant information. Nevertheless, KGI Securities (Thailand) Public Company Limited (KGI) does not confirm, verify, or certify the accuracy and completeness of such survey result.

Anti-corruption Progress Indicator

Level 5: Extended

| Stock | Company name | Stock | Company name | Stock | Company name |
|--------|--------------------------------|--------|------------------------------|--------|---|
| ADVANC | ADVANCED INFO SERVICE | GLOBAL | SIAM GLOBAL HOUSE | QH | QUALITY HOUSES |
| ANAN | ANANDA DEVELOPMENT | GPSC | GLOBAL POWER SYNERGY | RATCH | RATCHABURI ELECTRICITY GENERATING HOLDING |
| BBL | BANGKOK BANK | HMPRO | HOME PRODUCT CENTER | ROBINS | ROBINSON DEPARTMENT STORE |
| BCH | BANGKOK CHAIN HOSPITAL | IRPC | IRPC | SCC | THE SIAM CEMENT |
| BDMS | BANGKOK DUSIT MEDICAL SERVICES | KBANK | KASIKORN BANK | SIRI | SANSIRI |
| BIGC | BIG C SUPERCENTER | KCE | KCE ELECTRONICS | SPALI | SUPALAI |
| CK | CH. KARNCHANG | KKP | KIATNAKIN BANK | STEC | SINO-THAI ENGINEERING AND CONSTRUCTION |
| DCC | DYNASTY CERAMIC | KTB | KRUNGTHAI BANK | TCAP | THANACHART CAPITAL |
| DELTA | DELTA ELECTRONICS (THAILAND) | LPH | LADPRAO GENERAL HOSPITAL | TISCO | TISCO FINANCIAL GROUP |
| DRT | DIAMOND ROOFING TILES | PACE | PACE DEVELOPMENT CORPORATION | TMT | THAI METAL TRADE |
| EGCO | ELECTRICITY GENERATING | PTT | PTT | TOP | THAI OIL |
| GFPT | GFPT | PTTGC | PTT GLOBAL CHEMICAL | | |

Level 4: Certified

| Stock | Company name | Stock | Company name | Stock | Company name |
|--------|----------------------------|--------|--------------------------------|--------|----------------------------|
| AAV | ASIA AVIATION | ERW | THE ERAWAN GROUP | SAPPE | SAPPE |
| AP | ASIAN PROPERTY DEVELOPMENT | GLOW | GLOW ENERGY | SAWAD | SRI SAWAD POWER 1979 |
| BA | BANGKOK AIRWAYS | GUNKUL | GUNKUL ENGINEERING | SCB | THE SIAM COMMERCIAL BANK |
| BANPU | BANPU | ILINK | INTERLINK COMMUNICATION | SCN | SCAN INTER |
| BCP | THE BANGCHAK PETROLEUM | KTC | KRUNGTHAI CARD | SEAFCO | SEAFCO |
| BH | BUMRUNGRAD HOSPITAL | LH | LAND AND HOUSES | SVI | SVI |
| BJCHI | BJC HEAVY INDUSTRIES | LPN | L.P.N. DEVELOPMENT | TASCO | TIPCO ASPHALT |
| CBG | CARABAO GROUP | MAKRO | SIAM MAKRO | TKN | TAOKAENOI FOOD & MARKETING |
| CENTEL | CENTRAL PLAZA HOTEL | MALEE | MALEE SAMPRAN | TMB | TMB BANK |
| CHG | CHULARAT HOSPITAL | MINT | MINOR INTERNATIONAL | TRT | TIRATHAI |
| CKP | CK POWER | MODERN | MODERNFORM GROUP | TRUE | TRUE CORPORATION |
| CPF | CHAROEN POKPHAND FOODS | NOK | NOK AIRLINES | TVO | THAI VEGETABLE OIL |
| CPN | CENTRAL PATTANA | PTTEP | PTT EXPLORATION AND PRODUCTION | | |
| DTAC | TOTAL ACCESS COMMUNICATION | PYLON | PYLON | | |

Level 3: Established

| Stock | Company name | Stock | Company name | Stock | Company name |
|-------|------------------------------|-------|-------------------|-------|-------------------------|
| BEM | BANGKOK EXPRESSWAY AND METRO | MTLS | MUANGTHAI LEASING | SPRC | STAR PETROLEUM REFINING |
| CPALL | CP ALL | SCI | SCI ELECTRIC | | |

No progress

| Stock | Company name | Stock | Company name | Stock | Company name |
|-------|----------------------|-------|--------------------|-------|-------------------|
| AOT | AIRPORTS OF THAILAND | BPP | BANPU POWER | FN | FN FACTORY OUTLET |
| BCPG | BCPG | BTS | BTS GROUP HOLDINGS | TPCH | TPC POWER HOLDING |

Source: www.cgthailand.org

Disclaimer: The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by the relevant institution as disclosed by the Office of the Securities and Exchange Commission, is made in order to comply with the policy and sustainable development plan for the listed companies. The relevant institution made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, KGI Securities (Thailand) Public Company Limited (KGI) does not confirm, verify, or certify the accuracy and completeness of the assessment result.

KGI Locations

| | | |
|------------------|----------|---|
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| | Shenzhen | Room 24D1, 24/F, A Unit, Zhen Ye Building, 2014 Bao'annan Road, Shenzhen, PRC 518008 |
| Taiwan | Taipei | 700 Mingshui Road, Taipei, Taiwan Telephone 886.2.2181.8888 · Facsimile 886.2.8501.1691 |
| Hong Kong | | 41/F Central Plaza, 18 Harbour Road, Wanchai, Hong Kong Telephone 852.2878.6888 Facsimile 852.2878.6800 |
| Thailand | Bangkok | 8th - 11th floors, Asia Centre Building 173 South Sathorn Road, Bangkok 10120, Thailand Telephone 66.2658.8888 Facsimile 66.2658.8014 |
| Singapore | | 4 Shenton Way #13-01 SGX Centre 2 Singapore 068807 Telephone 65.6202.1188 Facsimile 65.6534.4826 |

KGI's Ratings

| Rating | Definition |
|-------------------|---|
| Outperform (OP) | The stock's excess return over the next twelve months is ranked in the top 40% of KGI's coverage universe in the related market (e.g. Taiwan).. |
| Neutral (N) | The stock's excess return over the next twelve months is ranked in the range between the top 40% and the bottom 40% of KGI's coverage universe in the related market (e.g. Taiwan) |
| Under perform (U) | The stock's excess return over the next twelve months is ranked in the bottom 40% of KGI's coverage universe in the related market (e.g. Taiwan). |
| Not Rated (NR) | The stock is not rated by KGI. |
| Restricted (R) | KGI policy and/or applicable law regulations preclude certain types of communications, including an investment recommendation, during the course of KGI's engagement in an investment banking transaction and in certain other circumstances. Excess return = 12M target price/current price- |
| Note | When an analyst publishes a new report on a covered stock, we rank the stock's excess return with those of other stocks in KGI's coverage universe in the related market. We will assign a rating based on its ranking. If an analyst does not publish a new report on a covered stock, its rating will not be changed automatically. |

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