

Semiconductor

Synopsys eyes on Ansys: a potential software giant in the making

Per Bloomberg ([link](#)), **Synopsys**, one of the big three Electronic Design Automation (EDA) names, is in advanced talks to **acquire Ansys for around US\$35bn or ~US\$400 per share in a stock-and-cash deal**. The transaction could be announced as soon as this week. Ansys is currently trading at US\$348.63 per share (as of market close on 8 Jan), representing ~15% premium if the deal gets closed at US\$400 per share.

Ansys (market cap of ~US\$30bn) is an engineering simulation and 3D design software company that delivers product modeling solutions. **Synopsys** (market cap of ~US\$74bn) offers EDA tools, semiconductor IP and services focusing on silicon design and verification. Together with Cadence, Siemens (Mentor), these three companies take up over 70% of the global EDA market ([link](#)).

The history between Synopsys and Ansys can be traced back to as early as 2017, when the two formed a strategic partnership to enhance the design optimization of HPC, mobile, and auto products. This collaboration was to provide better service for overlapping customers and collaboration partners, i.e., ARM and MediaTek. ([link](#))

A further move to integrate Ansys business into Synopsys comes at a pivotal moment for Synopsys, as co-founder Aart de Geus is set to become executive chairman, passing the CEO role to COO Sassine Ghazi on 1 January. The deal would be one of the largest transactions globally of the past 12 months, according to Bloomberg. We think this potential deal will mark as a strategic move for Synopsys, which will create synergies and expand product offerings, as well as enhance clients' services.

Interestingly, another EDA designer Cadence approached Ansys earlier. We think **EDA companies are all trying to expand their business horizontally**. The rationales are as follows.

- EDA industry is highly concentrated. These EDA companies are aiming to obtain synergies through acquisitions, an easier way to **expand business and maintain their leading market positions**. If this transaction goes through, the EDA market will become even more top-heavy, leaving little space for smaller players.
- **Given the current geopolitical risks, leading semiconductor players may all seek to diversify their business and product portfolios**. In 3Q23, Synopsys and Cadence obtained significant revenues from China, 20% and 17%, respectively. Although China EDA peers are still in the early stage, the trend of semi localization is inevitable. It may be wise to prepare for the rainy days.

For China peers, there are well over 20 EDA companies in China. The China's EDA market is growing rapidly although the TAM is not big enough to support multiple public companies with valuation well above RMB 10bn. Empyrean Tech (301269 CH, NR) and Semitronix (301095 CH, NR) went public in July and August 2022, respectively. The consolidation history of global EDA names can serve as good reference. As one of the leading domestic EDA names, Empyrean has been doing consolidation since going public. They acquired XinDA Design Automation Limited for US\$10mn to expand its product offerings in EDA tools in 2022. We believe China's EDA market will see more consolidations and names with rich product offerings will survive.

OUTPERFORM
(Maintain)

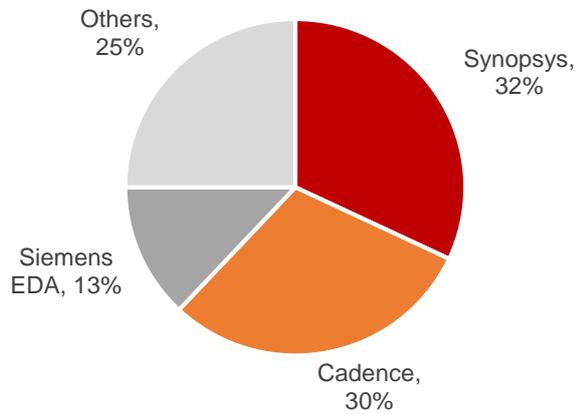
Semiconductor Sector

Lily Yang, Ph.D
(852) 3916 3716
lilyyang@cmbi.com.hk

Kevin Zhang
(852) 3761 8727
kevinzhang@cmbi.com.hk

Related Reports

1. China Semiconductor – Domestic AI chip makers accelerating their push as Nvidia's alternatives – 14 Dec 2023 ([link](#))
2. Technology (Hardware/Semi): AI supply chain will continue riding the tailwind as Nvidia confirmed growth of data center into 2025 – 23 Nov 2023 ([link](#))
3. Technology (Hardware/Semi) – Hyperscalers to deploy more custom AI chips to optimize & integrate AI infrastructure for maximized performance – 17 Nov 2023 ([link](#))
4. Quick note on newly announced restrictions on advanced AI chips - 18 Oct 2023 ([link](#))
5. Thematic investment and megatrend: Riding the AI wave into the next phase – 17 Oct 2023 ([link](#))
6. "Investors focusing on 800G transceivers ramp-up after 1H23 results" – 28 Aug 2023 ([link](#))
7. "Hardware – Optical transceivers: Implications from Coherent 2Q23 results and guidance" – 18 Aug 2023 ([link](#))
8. "Hardware – Optical transceivers : Investors expect spectacular results in the AI infrastructure arms race" – 14 Aug 2023 ([link](#))

Figure 1: Global EDA software market share (2021)

Source: Trendforce, CMBIGM estimates

Figure 2: EDA comps table

Company	LTM Rev. (US\$mn)	GPM	23 P/E	24 P/E
Synopsys	5,843	79.1%	44.6	37.1
Cadence	3,921	89.2%	51.3	44.4
Ansys	2,160	87.8%	40.7	36.5
Average		85.4%	45.5	39.3
Empyrean Tech	135	93.3%	214.6	154.9
Semitronix	62	64.4%	70.5	44.1
Primarius	49	81.9%	440.9	182.0
Average		79.9%	242.0	190.5

Source: Company data, Bloomberg, CMBIGM estimates
Note: Synopsys's fiscal year ends at 31 October.

Disclosures & Disclaimers

Analyst Certification

The research analyst who is primary responsible for the content of this research report, in whole or in part, certifies that with respect to the securities or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about the subject securities or issuer; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific views expressed by that analyst in this report.

Besides, the analyst confirms that neither the analyst nor his/her associates (as defined in the code of conduct issued by The Hong Kong Securities and Futures Commission) (1) have dealt in or traded in the stock(s) covered in this research report within 30 calendar days prior to the date of issue of this report; (2) will deal in or trade in the stock(s) covered in this research report 3 business days after the date of issue of this report; (3) serve as an officer of any of the Hong Kong listed companies covered in this report; and (4) have any financial interests in the Hong Kong listed companies covered in this report.

CMBIGM Ratings

BUY : Stock with potential return of over 15% over next 12 months
HOLD : Stock with potential return of +15% to -10% over next 12 months
SELL : Stock with potential loss of over 10% over next 12 months
NOT RATED : Stock is not rated by CMBIGM

OUTPERFORM : Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM : Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM : Industry expected to underperform the relevant broad market benchmark over next 12 months

CMB International Global Markets Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

CMB International Global Markets Limited ("CMBIGM") is a wholly owned subsidiary of CMB International Capital Corporation Limited (a wholly owned subsidiary of China Merchants Bank)

Important Disclosures

There are risks involved in transacting in any securities. The information contained in this report may not be suitable for the purposes of all investors. CMBIGM does not provide individually tailored investment advice. This report has been prepared without regard to the individual investment objectives, financial position or special requirements. Past performance has no indication of future performance, and actual events may differ materially from that which is contained in the report. The value of, and returns from, any investments are uncertain and are not guaranteed and may fluctuate as a result of their dependence on the performance of underlying assets or other variable market factors. CMBIGM recommends that investors should independently evaluate particular investments and strategies, and encourages investors to consult with a professional financial advisor in order to make their own investment decisions.

This report or any information contained herein, have been prepared by the CMBIGM, solely for the purpose of supplying information to the clients of CMBIGM or its affiliate(s) to whom it is distributed. This report is not and should not be construed as an offer or solicitation to buy or sell any security or any interest in securities or enter into any transaction. Neither CMBIGM nor any of its affiliates, shareholders, agents, consultants, directors, officers or employees shall be liable for any loss, damage or expense whatsoever, whether direct or consequential, incurred in relying on the information contained in this report. Anyone making use of the information contained in this report does so entirely at their own risk.

The information and contents contained in this report are based on the analyses and interpretations of information believed to be publicly available and reliable. CMBIGM has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIGM provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIGM may issue other publications having information and/ or conclusions different from this report. These publications reflect different assumption, point-of-view and analytical methods when compiling. CMBIGM may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

CMBIGM may have a position, make markets or act as principal or engage in transactions in securities of companies referred to in this report for itself and/or on behalf of its clients from time to time. Investors should assume that CMBIGM does or seeks to have investment banking or other business relationships with the companies in this report. As a result, recipients should be aware that CMBIGM may have a conflict of interest that could affect the objectivity of this report and CMBIGM will not assume any responsibility in respect thereof. This report is for the use of intended recipients only and this publication, may not be reproduced, reprinted, sold, redistributed or published in whole or in part for any purpose without prior written consent of CMBIGM.

Additional information on recommended securities is available upon request.

For recipients of this document in the United Kingdom

This report has been provided only to persons (I) falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended from time to time) ("The Order") or (II) are persons falling within Article 49(2) (a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc.") of the Order, and may not be provided to any other person without the prior written consent of CMBIGM.

For recipients of this document in the United States

CMBIGM is not a registered broker-dealer in the United States. As a result, CMBIGM is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. The research analyst who is primary responsible for the content of this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA"). The analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not affected by potential conflicts of interest that could bear upon the reliability of the research report. This report is intended for distribution in the United States solely to "major US institutional investors", as defined in Rule 15a-6 under the US, Securities Exchange Act of 1934, as amended, and may not be furnished to any other person in the United States. Each major US institutional investor that receives a copy of this report by its acceptance hereof represents and agrees that it shall not distribute or provide this report to any other person. Any U.S. recipient of this report wishing to effect any transaction to buy or sell securities based on the information provided in this report should do so only through a U.S.-registered broker-dealer.

For recipients of this document in Singapore

This report is distributed in Singapore by CMBI (Singapore) Pte. Limited (CMBISG) (Company Regn. No. 201731928D), an Exempt Financial Adviser as defined in the Financial Advisers Act (Cap. 110) of Singapore and regulated by the Monetary Authority of Singapore. CMBISG may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, as defined in the Securities and Futures Act (Cap. 289) of Singapore, CMBISG accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact CMBISG at +65 6350 4400 for matters arising from, or in connection with the report.