

China's IVF Market: Fast-Growing with Strong Demand Drivers and High Regulatory Barriers to Entry

EXECUTIVE SUMMARY

Infertility is becoming increasingly prevalent globally, primarily driven by several factors, including a rising number of women in the workforce, declining marriage rate, higher average age of first birth, problems with sperm of male and fallopian tube of female, sedentary lifestyle and pollution factors. According to **Frost & Sullivan**, infertility worldwide is **expected to climb to 17% by 2023** from 11% in 1997 and 15% in 2018.

On the other hand, **advanced technologies such as assisted reproductive technology ("ART")**, consisting of artificial insemination¹ ("AI"), gamete transfer² ("GT"), and in vitro fertilization³ ("IVF") in China among others, that introduced in recent decades have **clear advantages over unassisted methods**, thereby gaining popularity in treating infertility.

Researchers have developed methods that are used previously to improve the success rate of IVF with proven results. Hence, market observers are generally optimistic about IVF's outlook. For instance, Emergen Research forecasts the **global IVF market** in 2017 was only US\$5.05 billion, which is **projected to grow to US\$36.51 billion by 2028 with a compound annual growth rate ("CAGR") of 9.1%** during the forecast period between 2021 and 2028.

In China, the market for ART is both enormous and growing in view of the technology's low penetration rate and the country's high infertility. A nationwide reproductive health survey showed that China's infertility rate rose from 12% in 2007 to 18% in 2020, meaning every 5.6 couples of childbearing age have difficulties giving birth to their babies⁴. Mounting infertility is one of the reasons for the continued decline in China's birth rate. Data from the country's National Bureau of Statistics published in January 2022 revealed that there were only 10.6 million of births in 2021, a decline for the fifth straight year. Meanwhile, the **penetration rate of assisted reproductive services ("ARS") in China was merely 7.1% in 2018**, significantly lower than the **30.2% in the U.S.** in the same year, indicating huge business opportunities for IVF providers in China.

It is estimated that there are already 9.6 million infertile couples in China who are in need of ART, suggesting the potential market size of the entire ARS sector (including IVF technology, pharmaceuticals, and medical equipment) could be as much as RMB434.1 billion. However, the scale of ARS supply is currently estimated only RMB58.9 billion. The **supply and demand gap of RMB375.2 billion** depicts the remarkable future growth potential of the market. Moreover, **public assisted reproductive medical institutions account for 90% of supply**, leaving a substantial room for private assisted reproductive service hospitals and clinics to grow.

Following the amendment in December 2015 to adopt the "two-child" policy, the Population and Family Planning Law was revised by the Standing Committee of China's National People's Congress ("NPC"). Subsequently, a new amendment, referring to as the **"three-child policy" was announced on 20 August 2021**. Together with other supporting policies, it stimulates fertility and creates a significant growth potential for the ARS market in China.

¹ A doctor inserts sperm directly into a woman's cervix, fallopian tubes, or uterus. Fertilization takes place internally

² Removing the female egg and male sperm and mixing them into the fallopian tube immediately

³ A process of fertilization where an egg is combined with sperm in vitro (in a lab)

⁴ <https://www.scmp.com/economy/china-economy/article/3137724/china-population-infertility-rate-rising-faster-expected-new>

IMPORTANT DISCLOSURES

Cedrus Investments Ltd. (“Cedrus”) does and seeks to do business with companies covered in research reports distributed by Cedrus. Investors should consider this report as only a single factor in making their investment decision.

For additional information, please send an e-mail to information@cedrusinvestments.com

For private circulation only. This report is prepared by Cedrus and is for informational purposes only and is not intended to be, nor should it be construed to be, an advertisement or an offer or a solicitation of an offer to buy or sell any securities. The information herein, or upon which opinions have been based, has been obtained from sources believed to be reliable, but no representations, express or implied, or guarantees, can be made as to their accuracy, timeliness or completeness. The information and opinions in this report are current as of the date of the report. We do not endeavor to update any changes to the information and opinions in this report. Unless otherwise stated, all views expressed herein (including estimates or forecasts) are solely those of our research department and subject to change without notice.

The information provided in this research report is not provided to and may not be used by any person or entity in any jurisdiction where the provision or use thereof would be contrary to applicable laws, rules or regulations of any governmental authority or regulatory or self-regulatory organization or clearing organization or where Cedrus is not authorized to provide such information.

This report does not take into account the specific investment objectives, financial situation, and the particular needs of any specific company that may receive it. Before acting on any information in this report, readers should consider whether it is suitable for their own particular circumstances and obtain professional advice related to their own investment needs and objectives. The value of securities mentioned in this report and income from them may go up or down, and investors may realize losses on any investments. Past performance is not a guide to future performance. Future terms are not guaranteed, and a loss of original capital may occur.

Neither the analysts responsible for this report nor any related household members are officers, directors, or advisory board members of any covered company. No one at a covered company is on the Board of Directors of Cedrus or its affiliates. The compensation for the analysts who prepare reports is determined exclusively by senior management. Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of Cedrus as a whole, of which investment banking, sales and trading are a part.

Cedrus does engage in investment banking. Cedrus does trade securities on a principal basis; however, Cedrus’ research analysts are prohibited from owning securities they cover through Research Reports.

Copyright 2022 Cedrus Investments Ltd. All rights reserved. Any unauthorized use or disclosure prohibited.