Morgan Stanley | RESEARCH

IDEA

August 21, 2026 07:36 AM GMT

亚洲经济 | Asia Pacific

观点：亚洲如何为企业资本开支融资

我们预计，亚洲资本开支超级周期在宏观层面的融资约束有限。即使投资加速，亚洲较高的国内储蓄率和经常账户顺差仍将提供支撑。企业资本开支的资金来源将以内部现金流为主，其次是银行贷款，再是股票市场，对信用市场的依赖相对较低。

背景——为资本开支超级周期融资：

- 我们一直对亚洲资本开支前景持建设性看法。
- 我们认为，AI及相关数字基础设施支出、能源、国防和工业资本开支，将推动亚洲的资本开支超级周期。
- 我们预计资本开支将从2025年的11万亿美元升至2030年的16万亿美元。

下文将详细讨论这些资本开支的融资方式，并进一步分析主要经济体。

This translated report is made available for convenience only and is based on the original research report published in English. In the event of any discrepancy between the translation and the original research report, the content in the original research report will prevail. The original research report can be found here: Asia Economics: The Viewpoint: How Asia is funding its corporate capex (19 Aug 2026) .

本翻译报告仅供参考之便，基于以英文发表的原版研究报告。如果翻译与原版研究报告有任何不一致之处，以原版研究报告中的内容为准。原版研究报告可在此处查看： Asia Economics: The Viewpoint: How Asia is funding its corporate capex (19 Aug 2026)。

MORGAN STANLEY ASIA LIMITED+
Chetan Ahya
亚洲首席经济学家
Chetan.Ahya@morganstanley.com +852 2239-7812

MORGAN STANLEY ASIA (SINGAPORE) PTE.+
甘永康
亚洲经济学家
Derrick.Kam@morganstanley.com +65 6834-8272

MORGAN STANLEY ASIA LIMITED+
张乐然
经济学家
Jonathan.Cheung@morganstanley.com +852 2848-5652

王奕丹
经济学家
Kelly.Wang@morganstanley.com +852 3963-0891

MORGAN STANLEY INDIA COMPANY PRIVATE LIMITED+
Sudhanshu Agarwal
经济学家
Sudhanshu.Agarwal@morganstanley.com +91 22 6995-4568

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

摘要——亚洲企业资本开支迄今如何融资

宏观融资并非制约因素：首先，我们认为本轮资本开支超级周期在强度和持续时间上都将与2000年代中期非常相似。

在那一轮周期中，大多数经济体的经常账户顺差不断扩大。换言之，投资上升的同时，储蓄增长更快，因此多数亚洲经济体仍保持经常账户顺差。

我们认为本轮也将呈现类似格局。资本开支和出口增长将双重提振亚洲储蓄率——二者将提升生产率增长，推动企业部门总储蓄上升。

总体而言，区内12个经济体中有8个实现经常账户顺差，我们预计这一趋势将延续至2027年。

哪类融资来源更占主导——亚洲依赖银行贷款，美国依赖非银融资：在亚洲，除内部产生的现金流外，贷款仍是资本开支最大的融资来源；相比之下，美国则以市场化和非银行金融工具为主。

截至2026年一季度，中国贷款占商业部门融资总额的70%；除中国以外的亚洲经济体的占比略低，但仍高达60%。

股票及投资基金份额是第二大融资来源，而对信贷市场依赖很低——这反映亚洲信贷市场的发展程度仍不及美国。

本轮周期中，亚洲本地利率低于美国；同时亚洲货币面临贬值压力，使企业发行美元债的吸引力下降。与此相呼应，信用债净发行已连续第四年为负。

亚洲AI资本开支主要由内部现金流融资

尽管亚洲AI资本开支快速增长，但仍显著低于美国。

具体而言，摩根士丹利亚洲互联网与电信股票研究负责人余凯杰（Gary Yu）指出，亚洲AI资本开支预计将从2025年的800亿美元升至今年的1,950亿美元，并于明年进一步升至2,500亿美元。

约85%的资金将来自内部留存收益及资产负债表现金。

对于美国，我们的信贷策略团队估计，在总计3.21万亿美元的融资需求中，54.5%将由信贷市场满足。

在半导体资本开支方面，相关公司的剩余现金甚至比超大规模云服务商更为充裕，因此预计其全部资本开支均可能通过该渠道融资。

按经济体看——除中国以外的亚洲经济体企业资本开支如何融资

我们进一步分析以下五个主要经济体：澳大利亚、日本、韩国、印度和台湾。

对于这些除中国以外的大多数亚洲经济体而言，除内部现金流外，贷款是主要融资来源；但第二大融资来源因市场而异。

- 澳大利亚：银行贷款与股票/投资基金份额的重要性几乎相当。
- 日本：融资明显偏向银行贷款，债务证券远居其次。
- 韩国：第二大融资来源为贸易信贷及应付账款。
- 印度：依赖FDI融资以及股票/投资基金份额。
- 台湾：与其他经济体不同，贸易信贷及应付账款实际上是最大融资来源，甚至超过贷款。

中国——银行贷款是主导渠道： 银行贷款占融资的70%，债务证券以15%居第二。

融资展望——银行仍将是主导渠道

截至2025年12月，亚洲经济体（除中国外）的企业信贷/GDP为74%，低于十年前的75%。

我们认为，这将有助于延长亚洲资本开支周期。

事实上，除中国外的亚洲经济体的银行信贷增速已升至19年高位。

我们认为，本轮周期中银行信贷仍将是企业资本开支的主要融资渠道。

亚洲工业与资本开支周期受到多项新增结构性需求驱动因素支撑

亚洲资本开支超级周期的四大相互强化的结构性驱动因素
AI及AI相关数字基础设施：AI相关支出仍是CIO的首要事项之一，亚洲企业部门需要加快投入以追赶美国。亚洲仍是AI供应链的重要供应方，相关公司也将整体提高资本开支，以满足不断上升的需求。
能源：整个亚洲地区都需要增加能源投资，包括为AI供电、推动向可再生能源转型以及保障能源安全。近期能源冲击后，这一议题的重要性进一步上升。
国防支出：亚洲各地政策制定者原本已计划在未来几年增加国防预算。地缘政治紧张局势进一步巩固了这一支出上升趋势。
更广泛的工业资本开支：亚洲经济体正推动工业供应链本土化，叠加上述三大领域支出上升，随着整体影响传导至整条供应链，将催化更广泛的资本开支和工业周期，并形成正向强化循环。

资料来源：摩根士丹利研究部预测

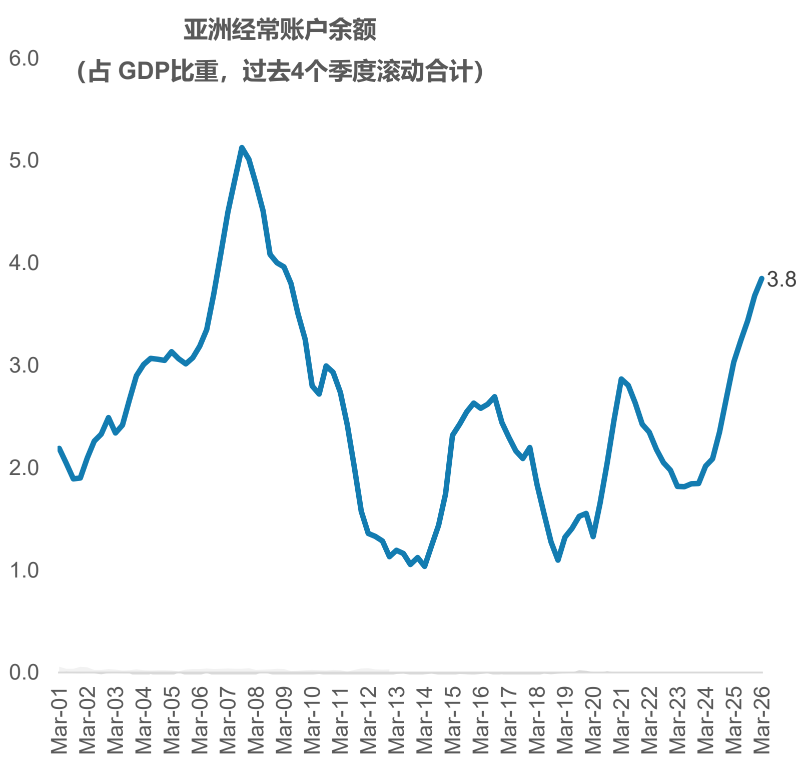
按驱动因素测算资本开支规模

十亿美元									
	AI 超大规模云服务商支出 (a)	半导体制造资本开支 (b)	超大规模云服务商及半导体制造资本开支（a+b=c)	能源资本开支 (d)	国防资本开支 (e)	新增结构性需求驱动 (c+d+e=f)	更广泛的工业资本开支 (g)	其余资本开支 (h)	总资本开支 (f+g+h)
2026E	200	250	450	900	260	1610	4000	6500	12110
2030E	400	430	830	1350	570	2750	5240	7700	15690
Delta	**200**	**180**	**380**	**450**	**310**	**1140**	**1240**	**1200**	**3580**

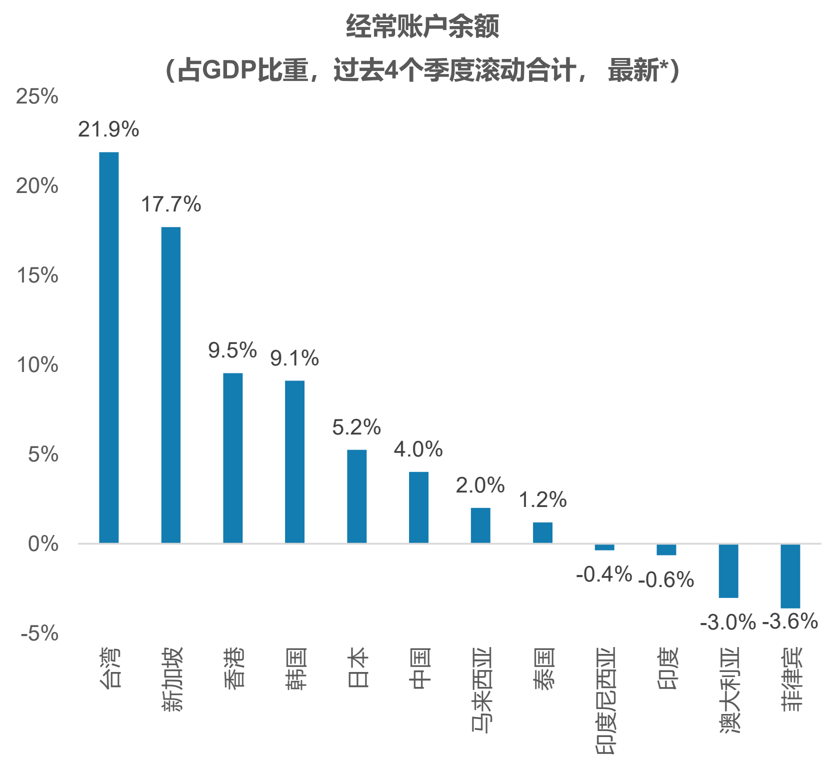
资料来源：CEIC、Haver、IEA、Lowy Institute、摩根士丹利研究部预测；注：*鉴于房地产需求结构性下滑，我们剔除中国房地产资本开支。

多数亚洲经济体保持经常账户顺差因此不存在宏观融资压力

亚洲经常账户顺差占GDP比重已升至全球金融危机后高位



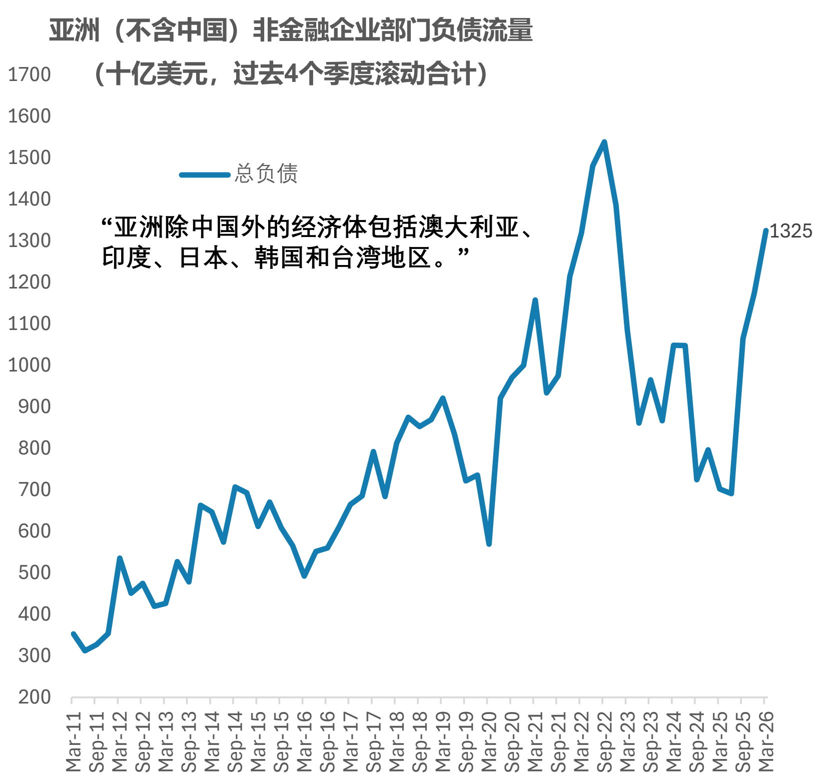
区内12个经济体中有8个实现经常账户顺差



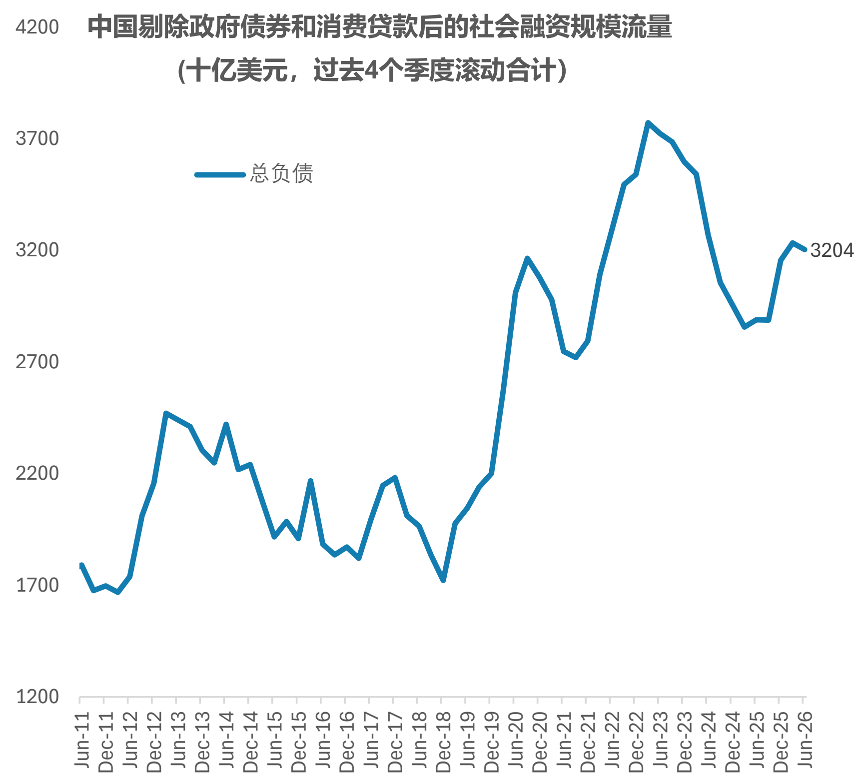
资料来源：CEIC、Haver、摩根士丹利研究部；注：右图最新数据中国、马来西亚、新加坡和日本为2026年二季度，其余经济体为2026年一季度。

亚洲企业部门融资需求随资本开支上升而增加

亚洲经济体（除中国外）企业部门负债流量大幅上升



由于内需仍偏弱，中国的增幅相对温和



资料来源：CEIC、Haver、摩根士丹利研究部；注：左图基于资金流量表负债流量数据。受数据可得性限制，除中国以外的亚洲经济体包括印度、韩国、台湾地区、日本和澳大利亚。右图中，我们使用月度社会融资规模（TSF）流量数据估算中国企业部门负债。为更好地近似企业部门负债，我们从社融中剔除政府债券融资，并扣除居民消费贷款余额变化。

亚洲企业资本开支如何融资——与美国和欧元区比较

非金融企业部门融资结构（占比%，最近4个季度滚动合计）	贷款	股票及投资基金份额	债务证券	贸易信贷及应付账款	FDI及对外债权	其他负债
美国	18%	8%	13%	22%	-1%	41%
欧元区	42%	27%	9%	19%	0%	2%
中国	70%	3%	15%	0%	0%	13%
印度	80%	7%	5%	0%	8%	0%
韩国	33%	9%	1%	23%	15%	20%
台湾地区	30%	22%	9%	39%	1%	0%
澳大利亚	53%	50%	1%	2%	0%	-6%
日本	107%	-11%	8%	1%	1%	-6%
亚洲（不含中国）	**70%**	**9%**	**6%**	**8%**	**6%**	**1%**
亚洲	**72%**	**4%**	**11%**	**2%**	**2%**	**9%**

包括来自私募股权基金和对冲基金的贷款

贸易信贷与出口走强高度相关

主要受衍生品持仓负债下降推动

保险及养老金基金债权

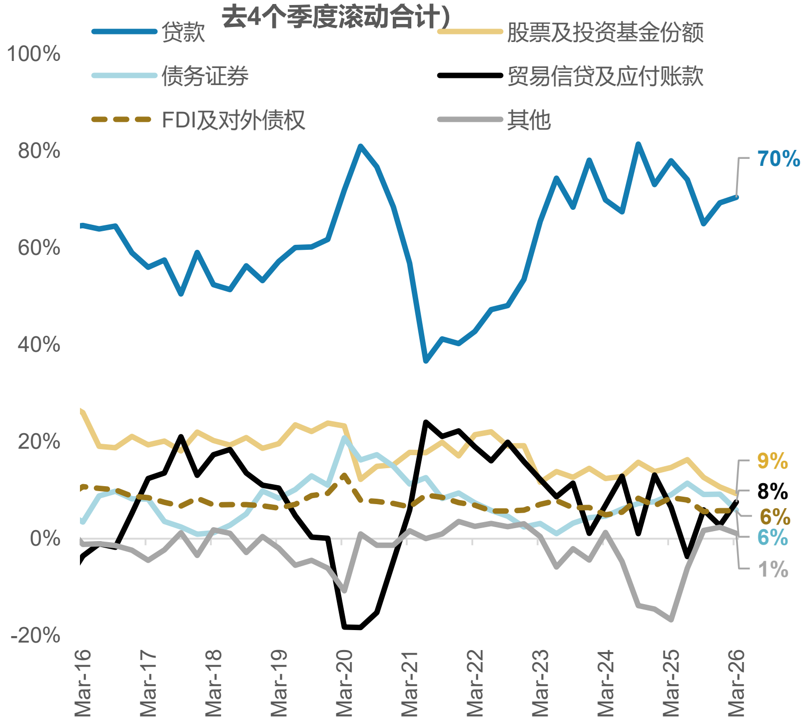
股票回购导致上市股权负债下降

资料来源：CEIC、Haver、摩根士丹利研究部预测；注：使用资金流量表负债流量数据。中国数据截至2026年二季度，其他经济体截至2026年一季度；台湾地区2025-26年数据为摩根士丹利预测。

对亚洲而言，银行贷款是最大的融资来源

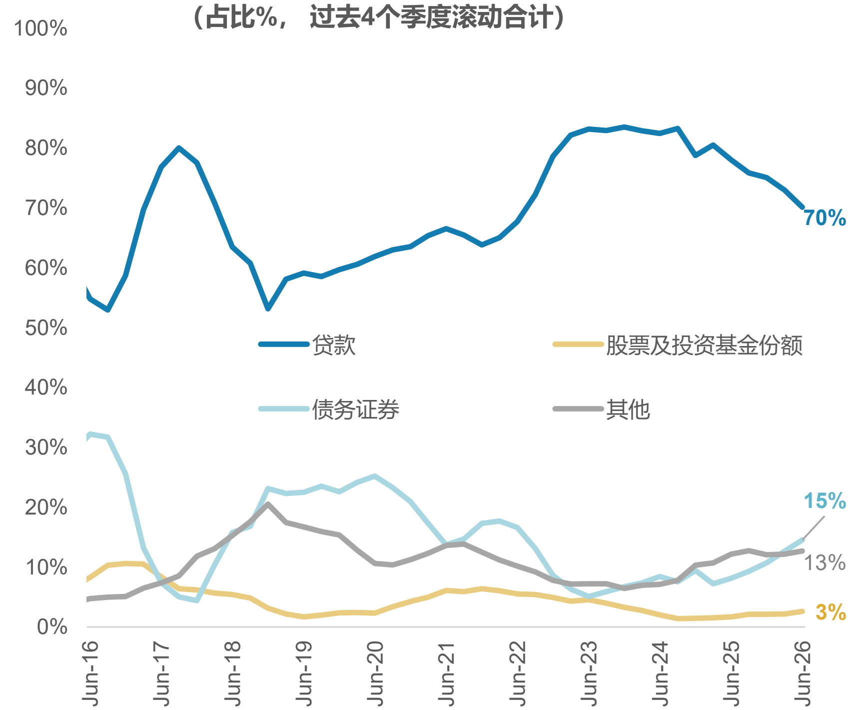
除中国以外亚洲经济体企业部门融资结构中，贷款仍占最大比重

亚洲（不含中国）：非金融企业部门融资结构（占比%，过去4个季度滚动合计）



同样，贷款在中国也占最大比重

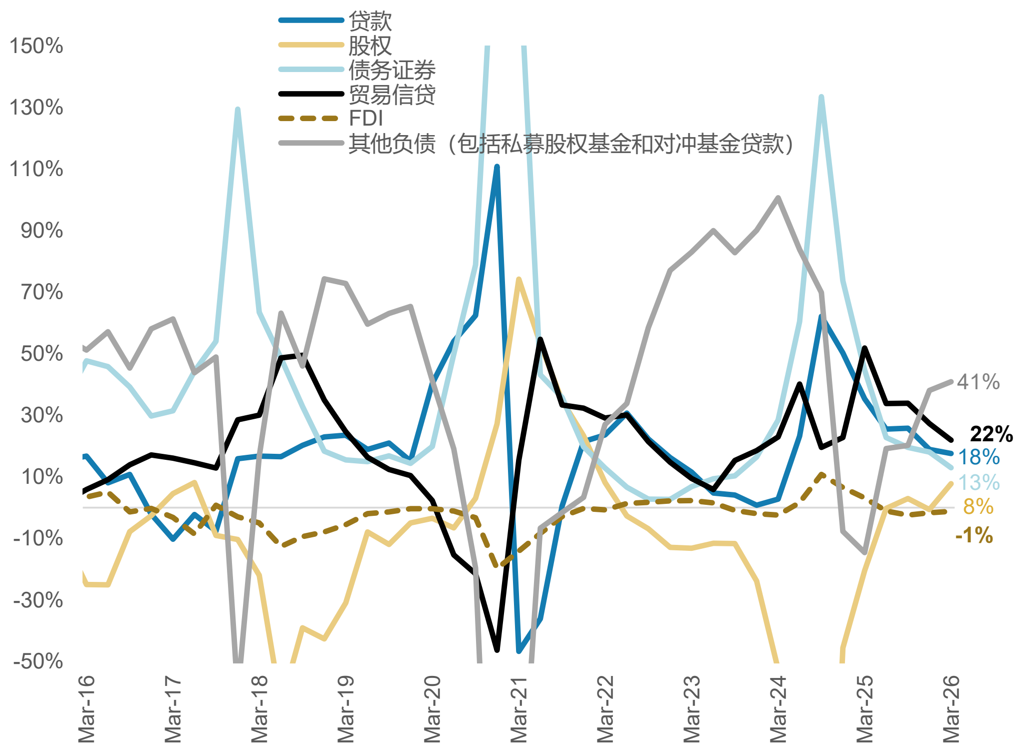
中国剔除政府债券和消费贷款后的社会融资规模流量（占比%， 过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：左图基于资金流量表负债流量数据。受数据可得性限制，亚洲除中国以外的经济体包括印度、韩国、台湾地区、日本和澳大利亚。台湾经济体官方资金流量数据截至2024年，2025年起为我们的估算。印度FY2019-20之前的融资结构我们是基于已停用的历史资金流量数据集进行估算。台湾经济体数据仅按年度公布，我们插值至季度频率；印度2024年前为年度数据并插值至季度频率，官方月度年初至今数据是从2024年起可获得；其他经济体均使用官方季度数据。右图中，我们使用月度社会融资规模（TSF）流量数据估算中国融资结构。为更好地近似企业部门负债，我们从社融中剔除政府债券融资，并扣除居民消费贷款余额变化。

美国企业部门融资结构波动更大，目前更多依靠私募信贷、贷款和债务证券融资……

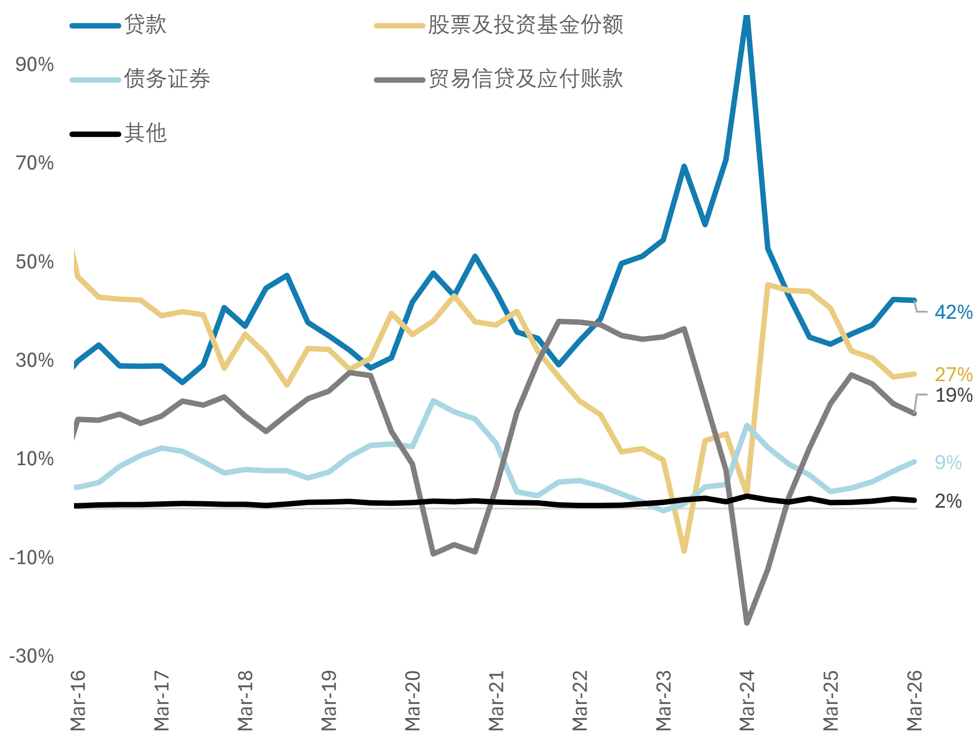
美国： 非金融企业部门融资结构 （占比%， 过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：美国"其他负债"包括养老金基金对发起人的债权（即企业未拨备养老金义务）、应付养老金缴款以及无法识别的其他负债。无法识别的其他负债按残差计算，可能包括私募股权基金和对冲基金贷款等项目。

……而欧元区更多通过贷款和股票市场融资

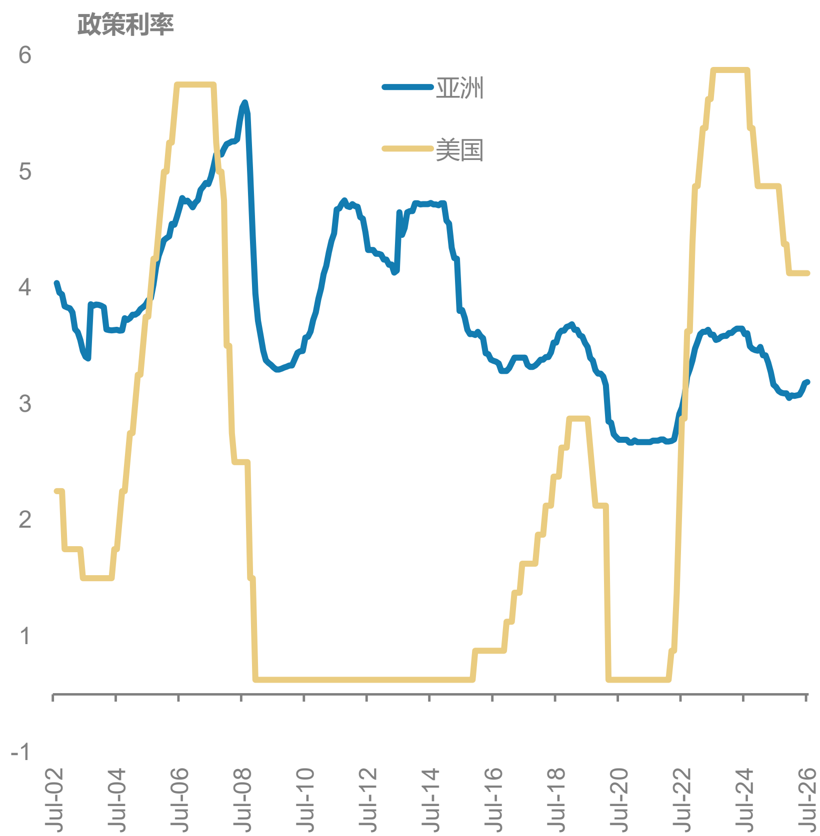
欧元区：非金融企业部门融资结构（占比%，过去4个季度滚动合计）



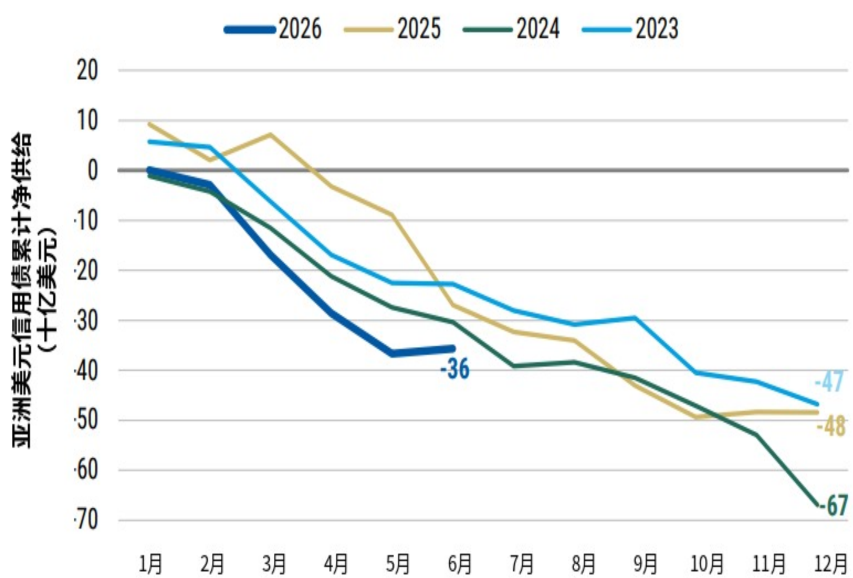
资料来源：CEIC、Haver、摩根士丹利研究部；注：美国"其他负债"包括养老金基金对发起人的债权（即企业未拨备养老金义务）、应付养老金缴款以及无法识别的其他负债。无法识别的其他负债按残差计算，可能包括私募股权基金和对冲基金贷款等项目。

对美元融资的依赖意愿下降，导致美元信用债净供给收缩

在美国利率较高的环境下，亚洲经济体可能继续偏向本币市场融资



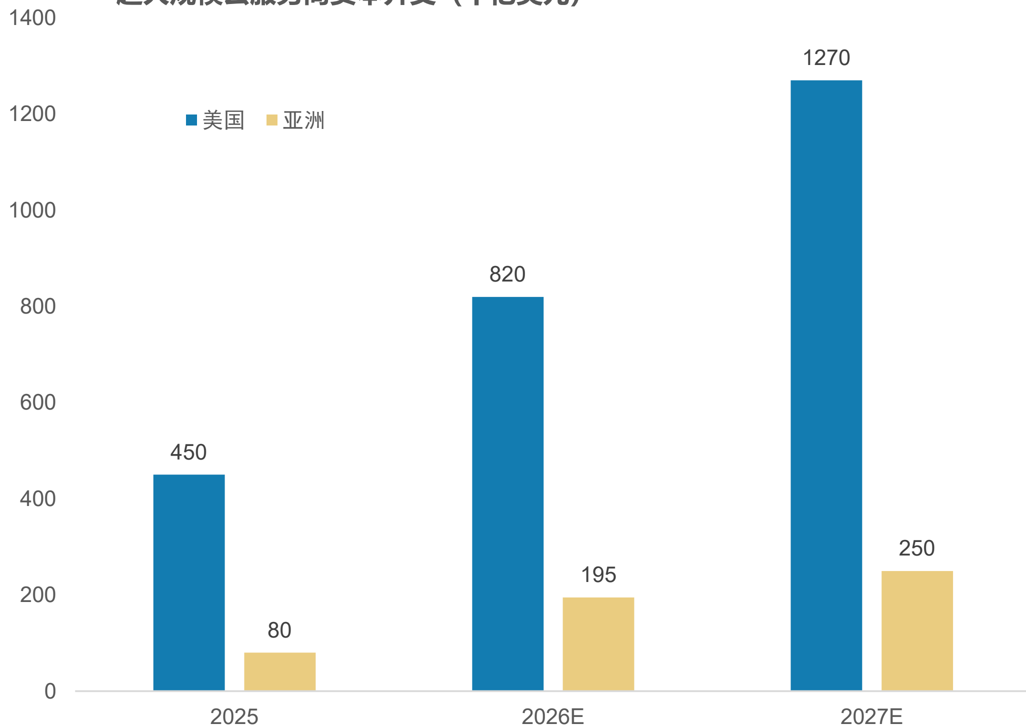
近年亚洲美元信用债净供给持续收缩，原因是美元融资成本相对本币融资更高



资料来源：CEIC、Haver、摩根士丹利研究部

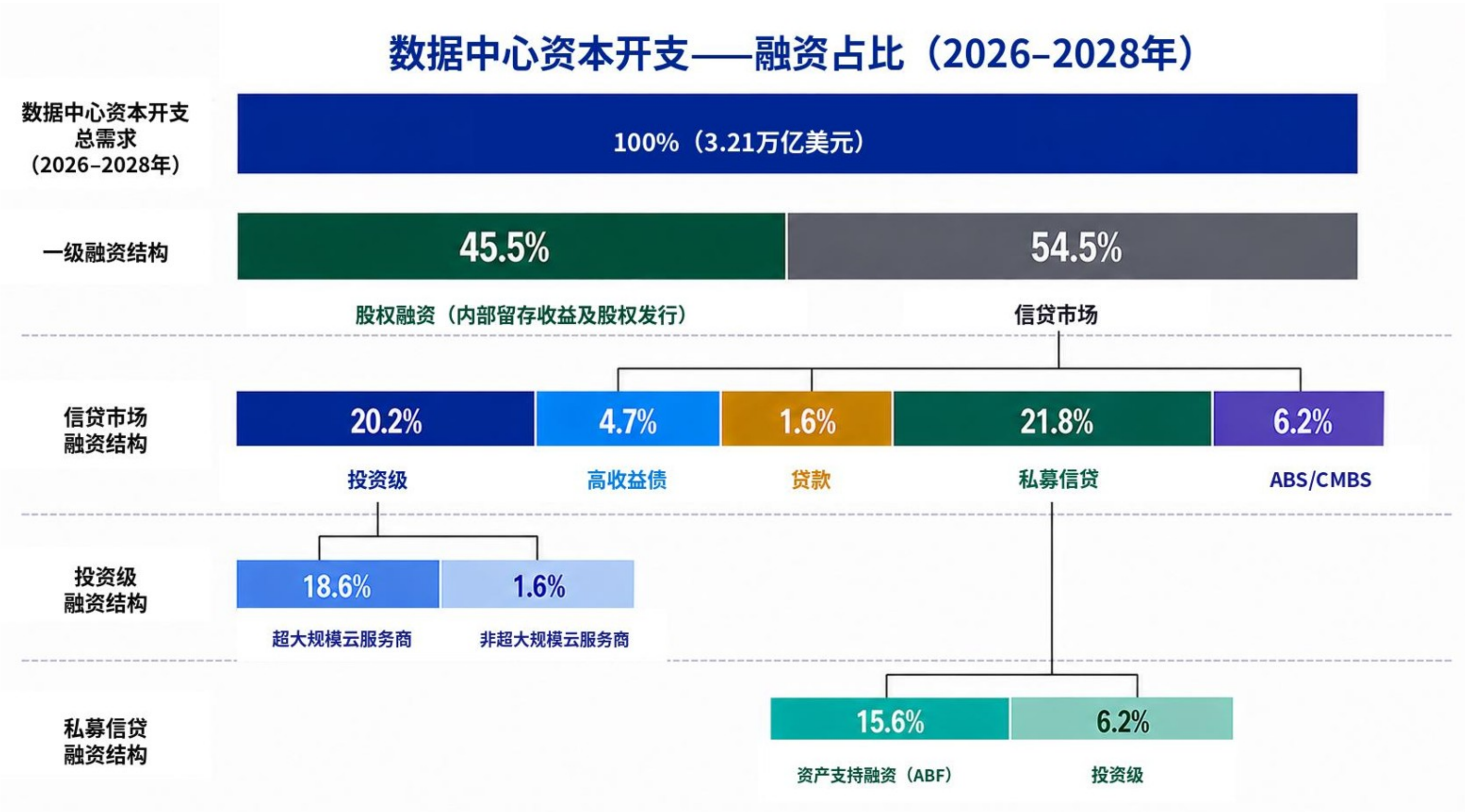
美国与亚洲：AI资本开支趋势

超大规模云服务商资本开支（十亿美元）



资料来源：公司数据、摩根士丹利研究部预测

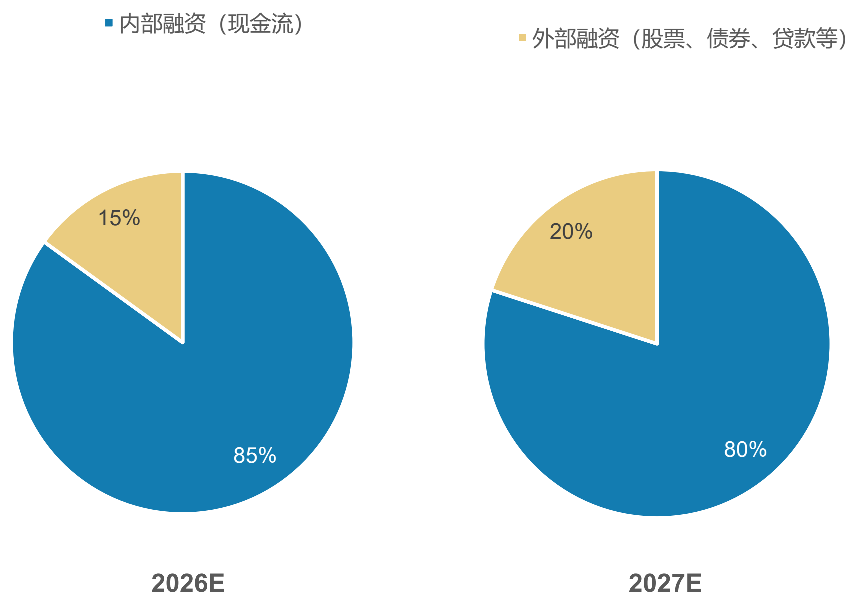
美国将如何为AI资本开支融资



资料来源：公司数据、摩根士丹利研究部预测

亚洲： 超大规模云服务商资本开支主要通过内部现金流融资

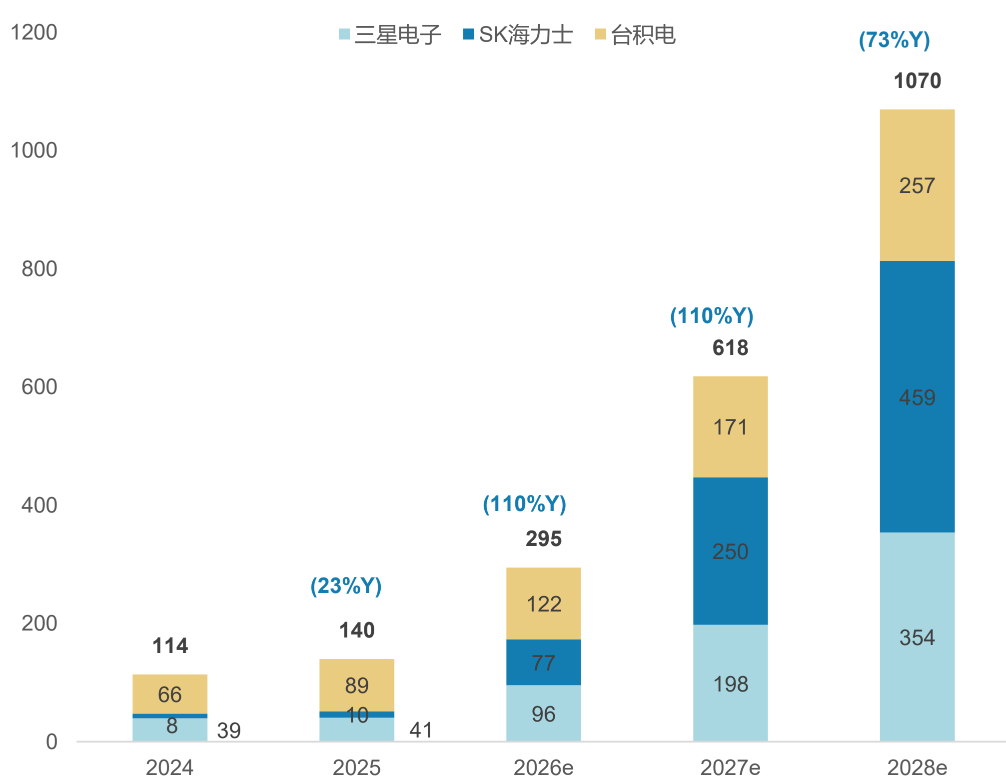
亚洲AI 资本开支按资金来源的融资结构



资料来源：公司数据、摩根士丹利研究部预测

亚洲主要半导体公司剩余现金余额持续上升

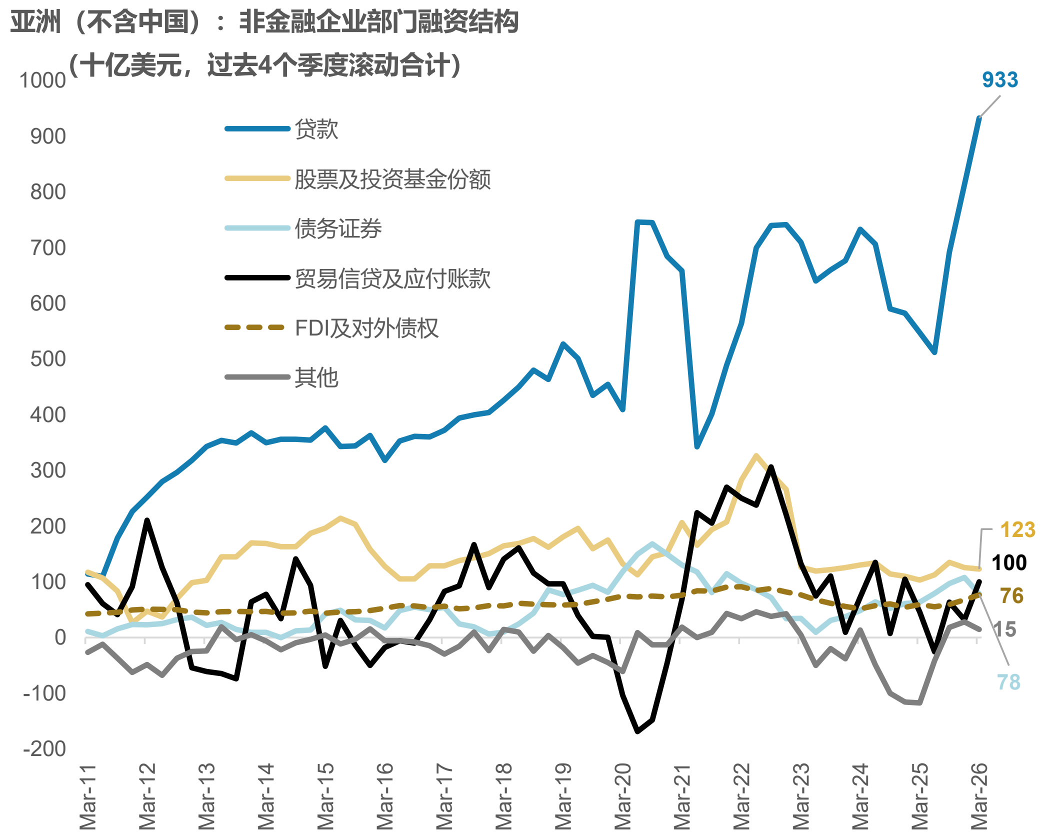
资产负债表上的现金及现金等价物（十亿美元）



资料来源：公司数据、摩根士丹利研究部预测

按经济体

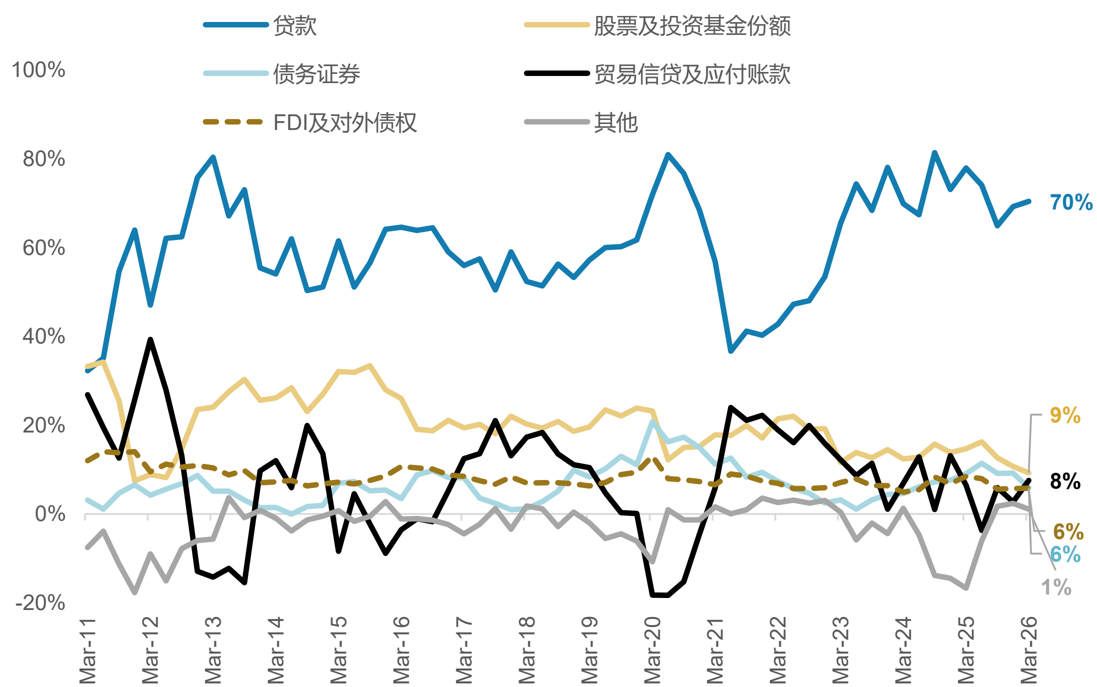
亚洲除中国外的经济体：近几个季度贷款融资大幅增加



资料来源：CEIC、Haver、摩根士丹利研究部；注：数据基于资金流量表负债流量。受数据可得性限制，亚洲除中国以外的经济体包括印度、韩国、台湾地区、日本和澳大利亚。台湾经济体官方资金流量数据截至2024年，2025年起为我们的估算。印度FY2019-20之前的融资结构我们是基于已停用的历史资金流量数据集进行估算。台湾经济体数据仅按年度公布，我们插值至季度频率；印度2024年前为年度数据并插值至季度频率，官方月度年初至今数据从2024年起可获得；其他经济体均使用官方季度数据。

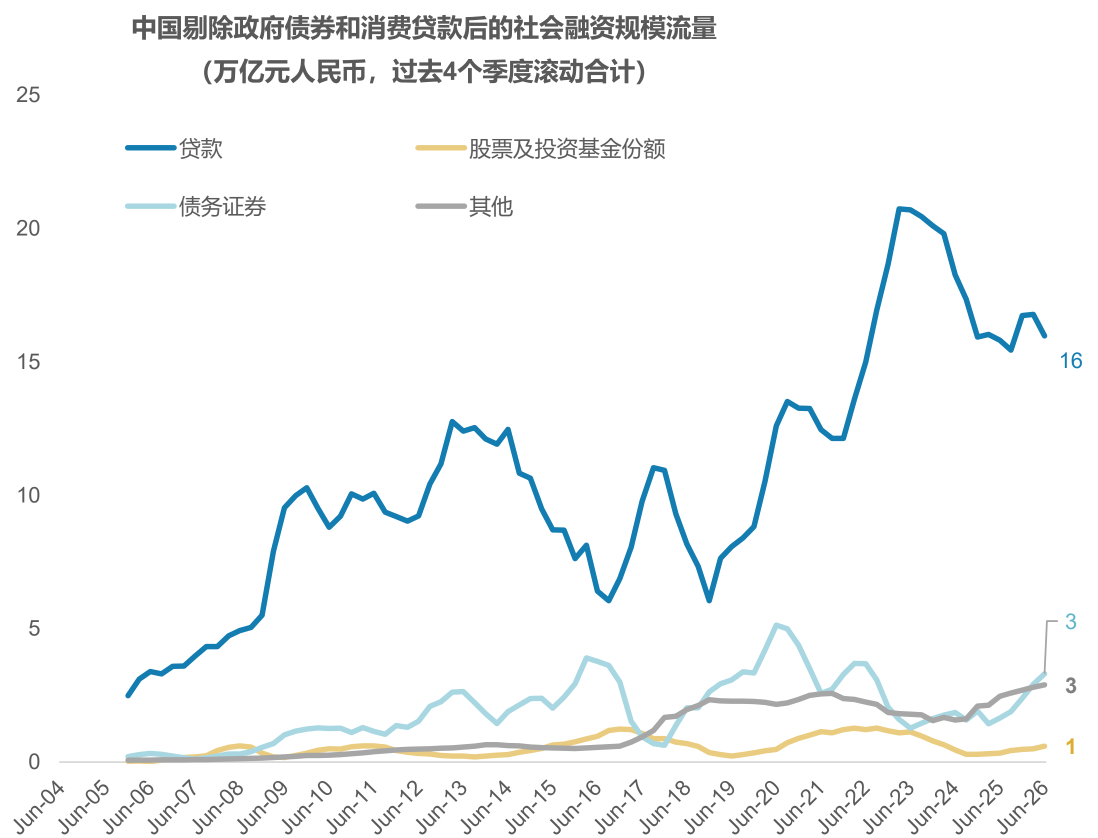
亚洲除中国外的经济体：贷款占融资的70%，股票融资以9%居次

亚洲（不含中国）：非金融企业部门融资结构
（占比%，过去4个季度滚动合计）



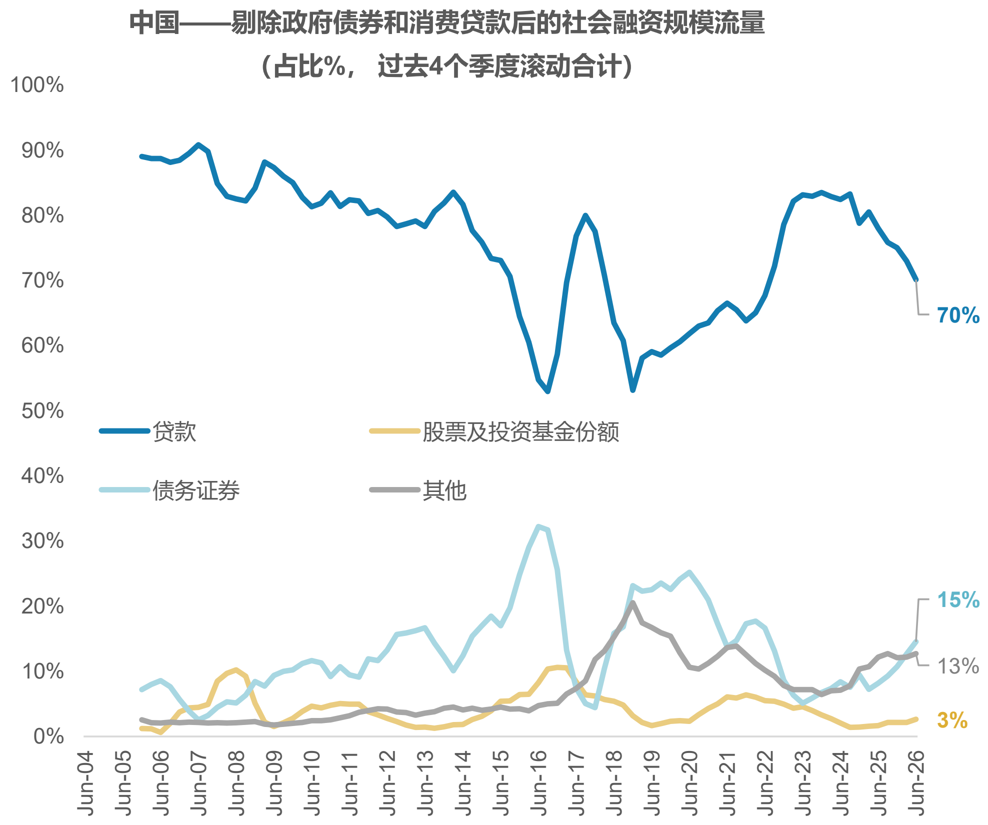
资料来源：CEIC、Haver、摩根士丹利研究部；注：数据基于资金流量表负债流量。受数据可得性限制，亚洲除中国以外的经济体包括印度、韩国、台湾地区、日本和澳大利亚。台湾经济体官方资金流量数据截至2024年，2025年起为我们的估算。印度FY2019-20之前的融资结构我们是基于已停用的历史资金流量数据集进行估算。台湾经济体数据仅按年度公布，我们插值至季度频率；印度2024年前为年度数据并插值至季度频率，2024年起可获得官方月度年初至今数据；其他经济体均使用官方季度数据。

中国——贷款融资仍是主导来源，但占比已下降



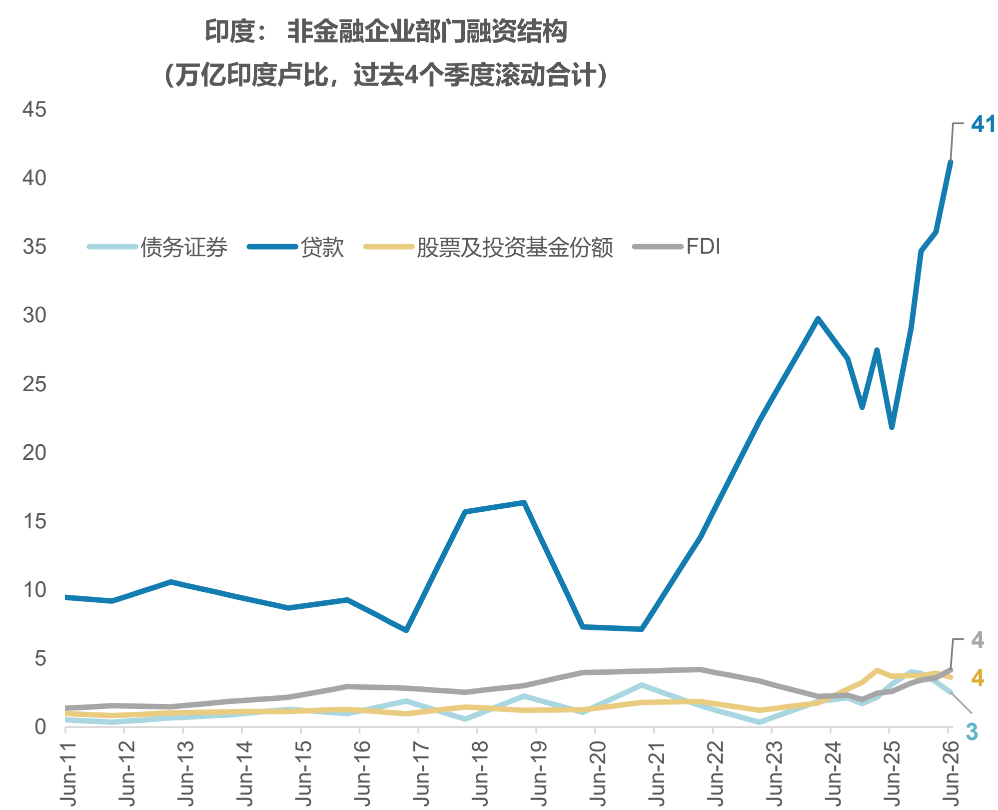
资料来源：CEIC、Haver、摩根士丹利研究部；注：由于中国资金流量数据仅提供有限分类且仅截至2024年，我们使用月度社会融资规模（TSF）流量数据估算融资结构。具体而言，我们从社融中剔除政府债券融资，并扣除居民消费贷款余额变化，以得到更能代表企业部门负债的指标。

中国——债务证券在融资中的占比上升



资料来源：CEIC、Haver、摩根士丹利研究部；注：由于中国资金流量数据仅提供有限分类且仅截至2024年，我们使用月度社会融资规模（TSF）流量数据估算融资结构。具体而言，我们从社融中剔除政府债券融资，并扣除居民消费贷款余额变化，以得到更能代表企业部门负债的指标。

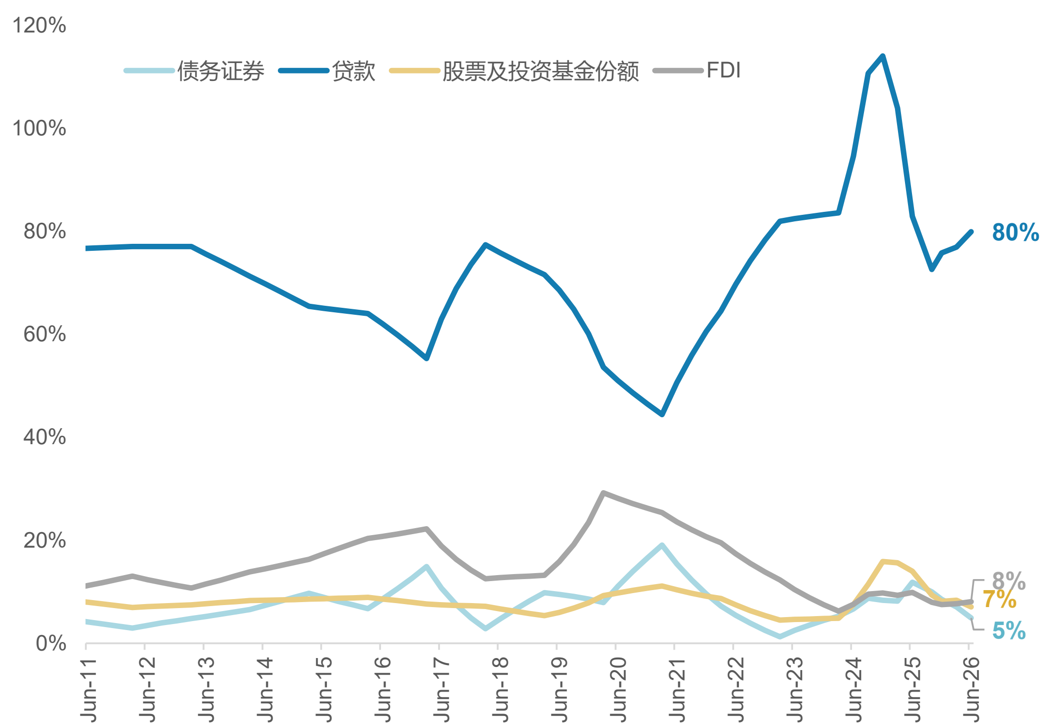
印度——银行贷款仍占主导，并推动近期企业融资回升



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。印度FY2019-20之前的融资结构基于已停用的历史资金流量数据集进行估算。2024年前为年度数据并插值至季度频率；2024年起可获得官方月度年初至今数据。

印度——融资仍高度集中于贷款

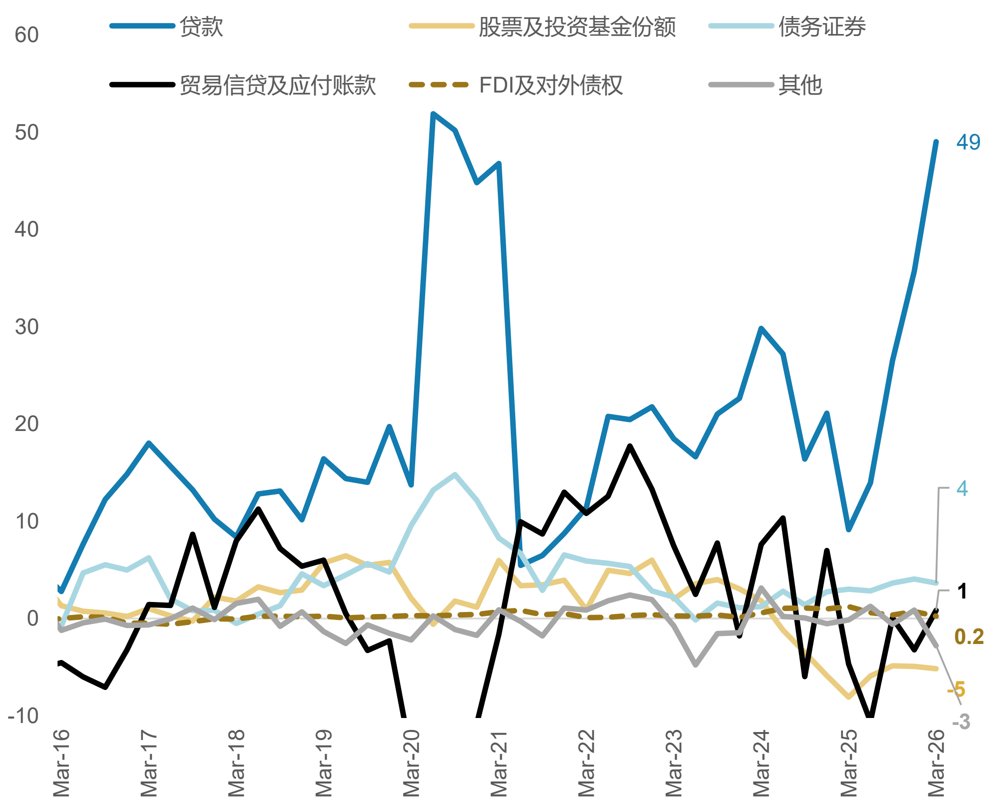
印度：非金融企业部门融资结构（占总额比例%，过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。印度FY2019-20之前的融资结构基于已停用的历史资金流量数据集进行估算。2024年前为年度数据并插值至季度频率；2024年起可获得官方月度年初至今数据。

日本——贷款大幅上升，而股票回购使股权融资转为负值

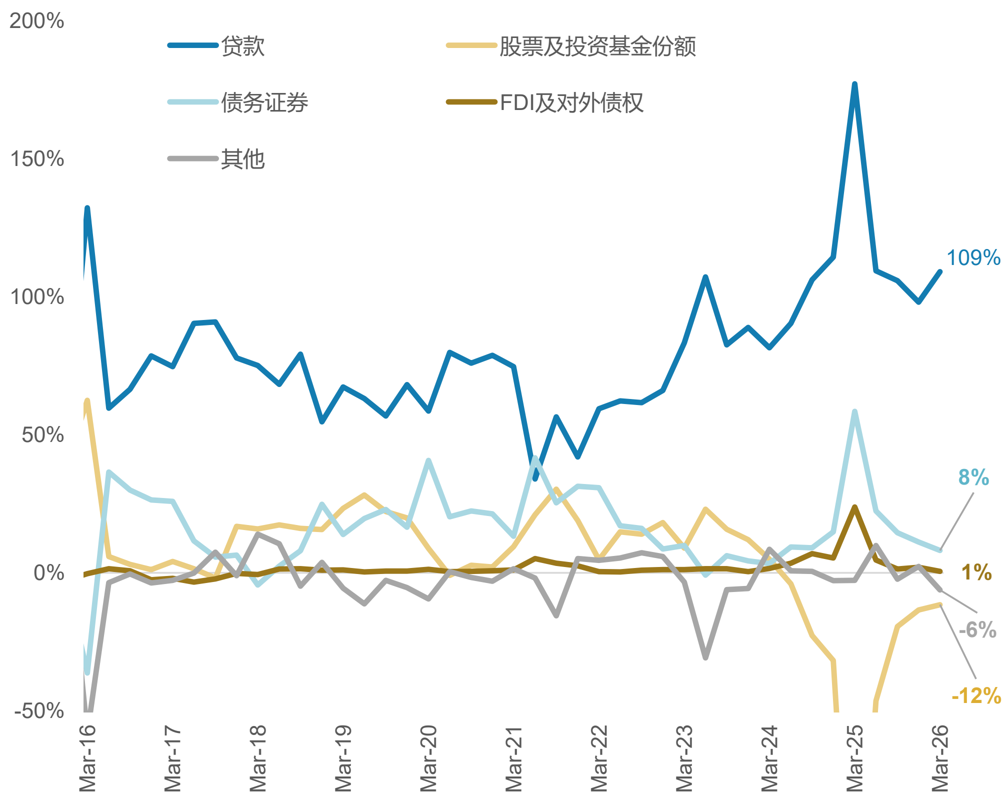
日本：非金融企业部门融资结构（万亿日元，过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。鉴于日本贸易信贷流量波动较大，右图融资结构以剔除贸易信贷后的总负债为分母计算。

日本——贷款占净融资的比重已升至100%以上

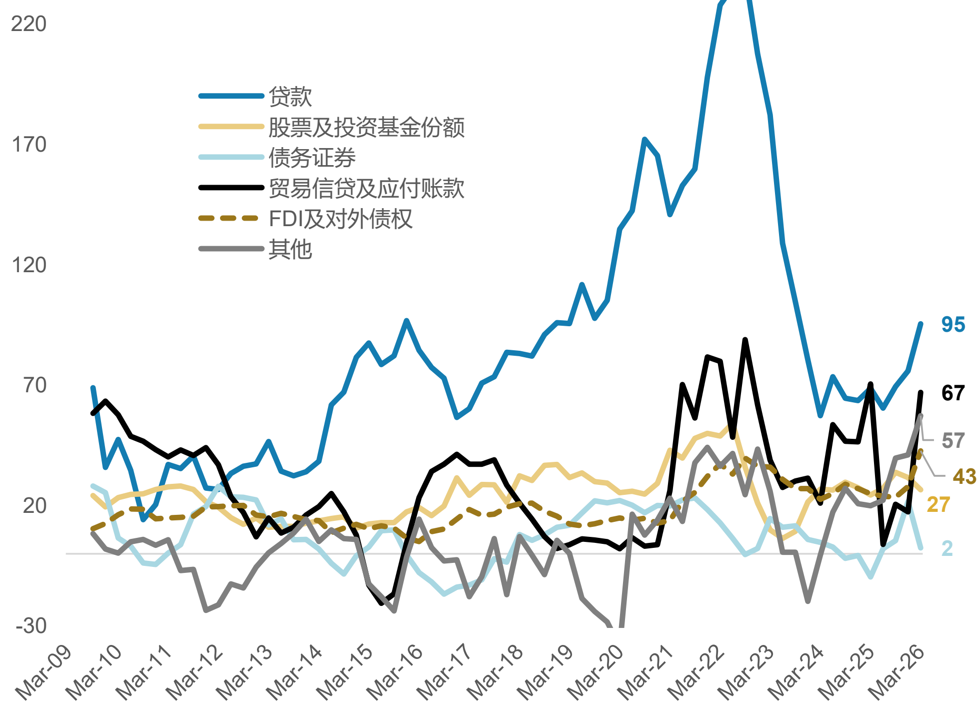
日本非金融企业部门融资结构 （占比%，过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。鉴于日本贸易信贷流量波动较大，右图融资结构以剔除贸易信贷后的总负债为分母计算。

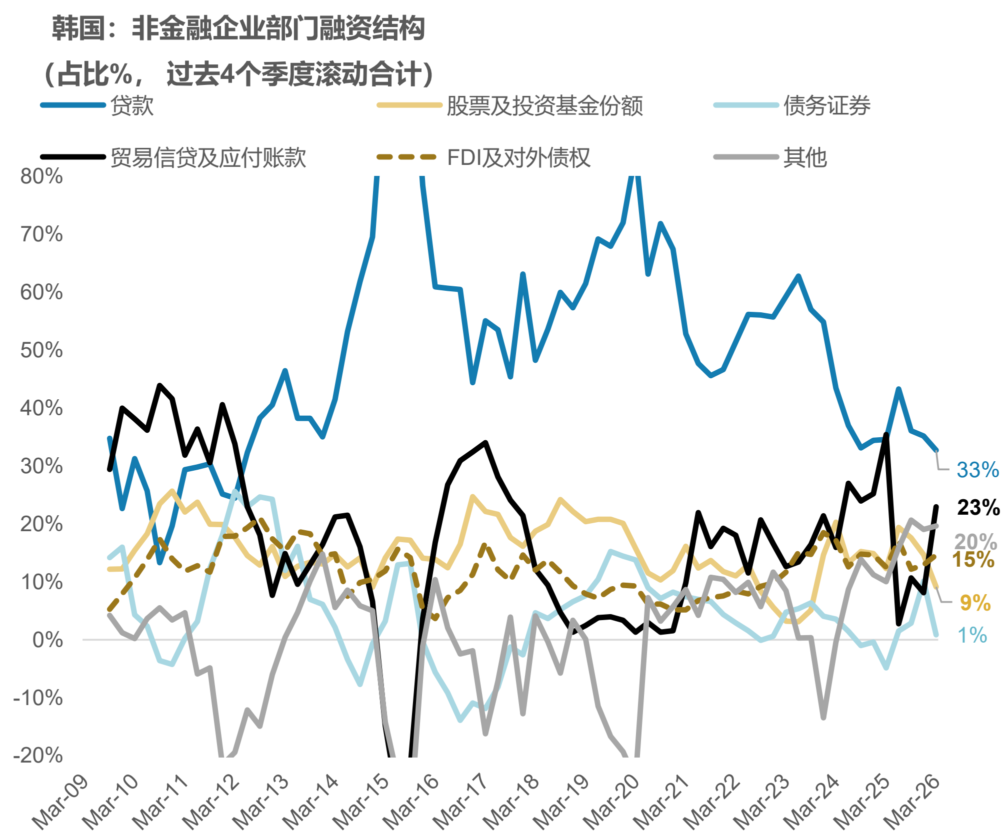
韩国——贷款、贸易信贷以及FDI和对外债权等多类融资来源均已回升

韩国：非金融企业部门融资结构
（万亿韩元，过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。

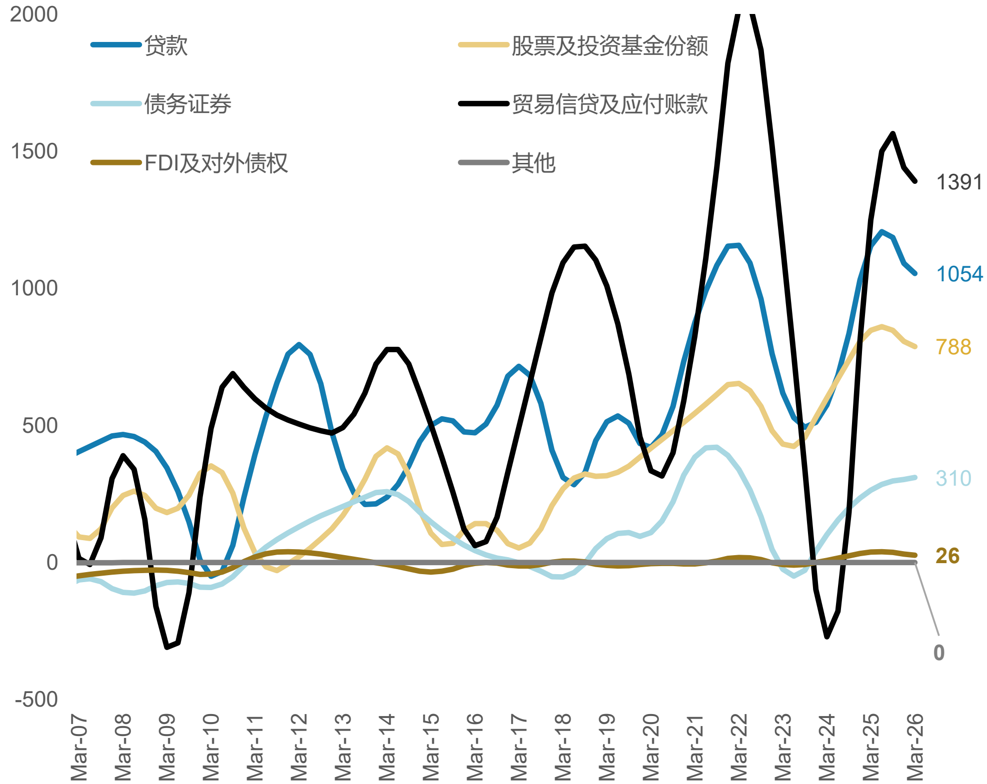
韩国——贷款仍是最大融资来源，但融资结构正趋于多元化



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。

台湾——贸易信贷、贷款和股权等主要来源的融资流量均保持较广泛增长

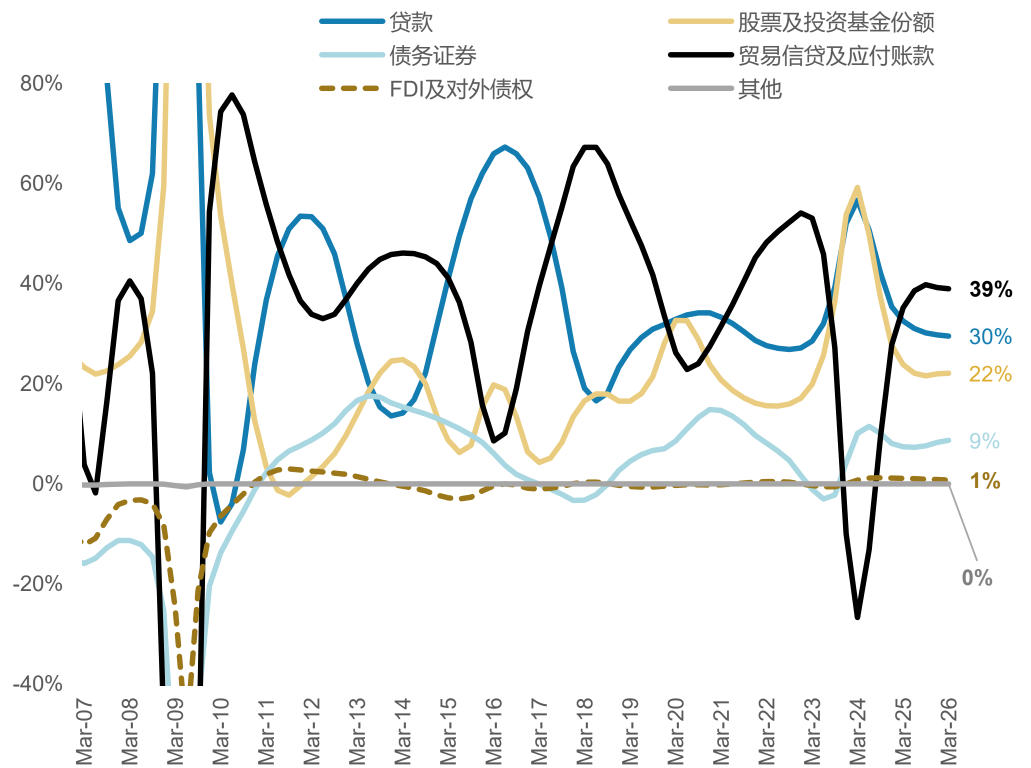
台湾：非金融企业部门融资结构
（十亿新台币，过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。台湾经济体官方资金流量数据截至2024年且按年度公布，我们将年度数据插值至季度频率；2025年起为我们的估算。

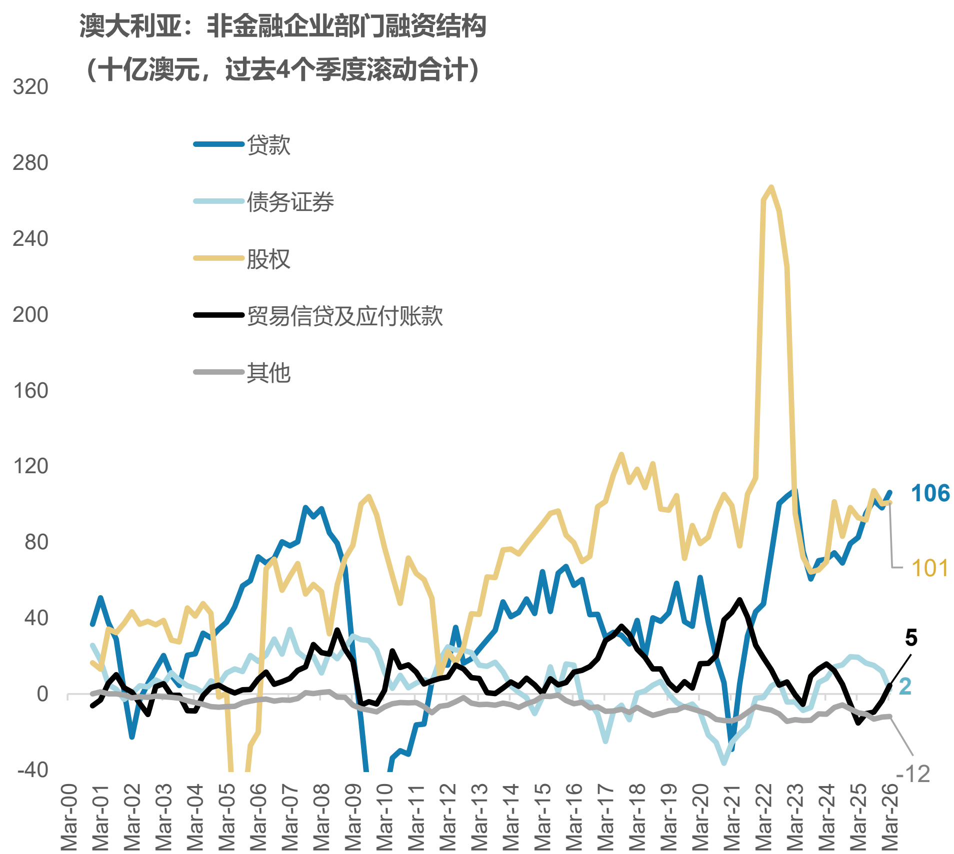
台湾——贸易信贷在融资结构中居首，其次为贷款和股权

台湾：非金融企业部门融资结构 （占比%， 过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。台湾经济体官方资金流量数据截至2024年且按年度公布，我们将年度数据插值至季度频率；2025年起为我们的估算。

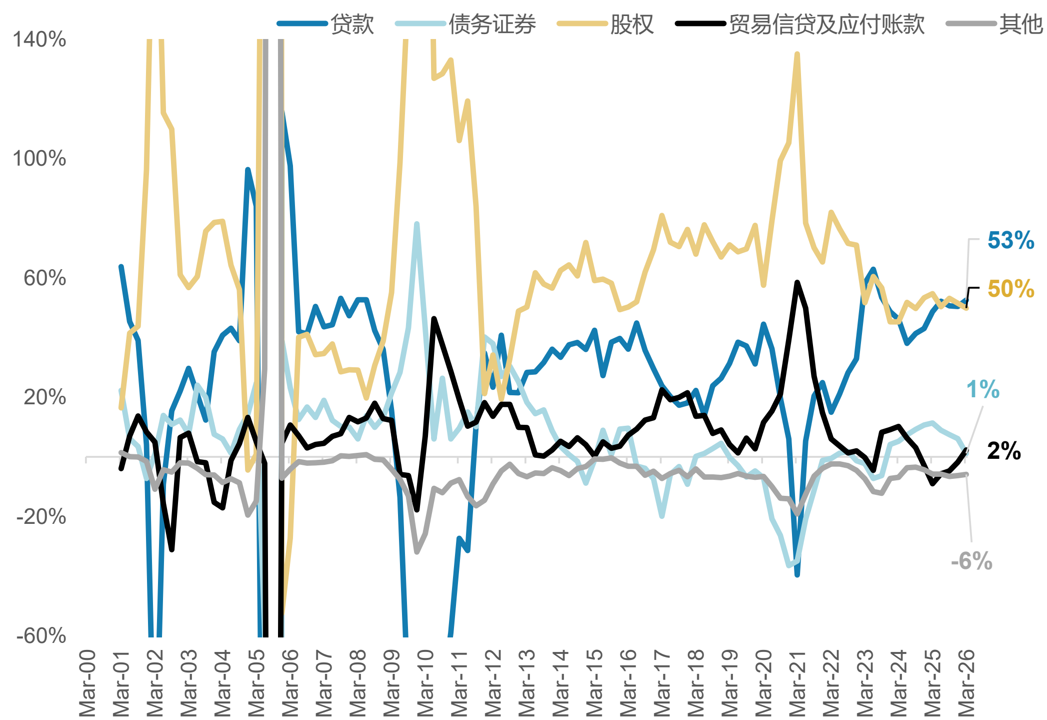
澳大利亚——贷款和股权融资走强，并继续主导融资结构



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。

澳大利亚——企业融资大致由贷款和股权各占一半

澳大利亚：非金融企业部门融资结构
（占总额比例%，过去4个季度滚动合计）



资料来源：CEIC、Haver、摩根士丹利研究部；注：融资结构基于资金流量表负债流量数据。

Disclosure Section

Information and opinions in Morgan Stanley Research were prepared or are disseminated by one or more of the following, which accept responsibility for its contents: Morgan Stanley Asia Limited, and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research), and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, and/or Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105), Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research and their affiliates (collectively, "Morgan Stanley"). Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts;
For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/eqr/disclosures/webapp/generalresearch, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Disclosures

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comision Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of

Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118J); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com. Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the United States by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA) or by Morgan Stanley & Co. International plc (ADGM Branch), regulated by the Financial Services Regulatory Authority Abu Dhabi (the FSRA), and is directed at Professional Clients only, as defined by the DFSA or the FSRA, respectively. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria of a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.