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编者按：2024浦江创新论坛——科技政策论坛以“科技金融政策与实践专题论坛”为主题，邀请国内外知名专家学者围绕构建系统完整的科技金融政策体系等议题展开深入研讨。本期专报对科技政策论坛嘉宾观点进行梳理，供参考。

Editor’s note: With the theme of a “special forum on science and technology finance policies and practices”, the Science and Technology Policy Forum under the 2024 Pujiang Innovation Forum invited renowned domestic and overseas experts and scholars to conduct in-depth discussions on topics such as building a comprehensive system of science and technology finance policies. This special report summarizes the viewpoints of the guests at the Science and Technology Policy Forum for your reference.

2024 浦江创新论坛专报之四

Special Report 4 of the 2024 Pujiang Innovation Forum

构建同科技创新相适应的科技金融体制和政策环境

Building a science and technology finance system, and a policy environment that is compatible with scientific and technological innovation

科技金融是科技与产业之间的桥梁和纽带，党的二十大以来，围绕构建同科技创新相适应的科技金融体制、推动科技创新与金融创新深入融合的科技金融政策越来越受到各方面的重点关注。**与会嘉宾一致认为，应以投早投小、投长期、投硬科技为政策导向，构建同科技创新相适应的科技金融体制机制和政策环境，促进科技界和金融界的交流互动，推动科技创新与金融创新深入融合，做好科技金融大文章。**

Science and technology finance is the bridge and link between technology and industries. Since the 20th CPC National Congress, science and technology finance policies that focus on building a science and technology finance system compatible with scientific and technological innovation, and driving the deep integration of scientific and technological innovation, and financial innovation have received increasing attention from all parties. **The guests present agreed unanimously that a science and technology**

finance system, mechanism and policy environment that is compatible with scientific and technological innovation should be built with the policy orientation of early-stage, small-scale and long-term investment, and hard technology to promote communication and interactions between the technology and financial communities, drive the deep integration of scientific and technological innovation, and financial innovation, and develop science and technology finance vigorously.

一、全球科技金融发展的新趋势

1. New trends in global science and technology finance development

1、参与企业头部化：越来越多的科技巨头通过投资孵化创业企业维持竞争优势。中山大学国家发展研究院院长赵昌文指出，科技巨头正逐步从幕后走向前台，直接参与到企业孵化的过程中。这些科技巨头利用自身的资源和技术优势，通过成立内部孵化器或投资部门，积极培育和支持早期科技创新企业的成长。这种做法不仅加速了创新技术的研发和商业化进程，也为科技巨头自身带来了新的增长点和竞争优势。

(1) Cephalization of participating enterprises: More and more technology giants are maintaining their competitive advantages by investing in and incubating startups. Zhao Changwen, President of the Institute of National Development

Studies, Sun Yat-sen University, pointed out that technology giants are shifting from the backend to the frontend gradually to participate directly in enterprise incubation. These technology giants promote and support the growth of scientific and technological innovation startups actively using their own resources and technological advantages by establishing internal incubators or investment arms. This practice not only accelerates the development and commercialization of innovative technologies, but also brings new growth points and competitive advantages to technology giants themselves.

2、**运作模式平台化：越来越多的"比科技企业更懂金融、比银行更懂科技"的新平台参与企业发展全周期。**新兴的平台型企业凭借其对科技领域的深刻理解和金融服务的专业把握，正逐渐成为连接科技创新与金融资本的桥梁。这些平台不仅在科技企业的成长各阶段提供资金和资源支持。它们通过整合各方资源，为企业提供全生命周期的融资服务，推动科技创新与金融资本的有效对接和互动，加速科技成果的转化和产业化进程。**赵昌文**以"粤科金融"为例指出，通过积极调动星辉资本的力量，粤科金融致力于推动初创型科技企业的成长。此外，粤科金融致力于深化对企业全生命周期的支持，通过延伸、补充和强化产业链，积极培育产业龙头企业。

(2) Platform-based operation models: More and more new platforms that know more about finance than technology

enterprises and technology than banks are participating in the full development cycle of enterprises. Emerging platform enterprises are becoming a bridge connecting scientific and technological innovation, and financial capital gradually based on their profound understanding of the technology field and expertise in financial services. These platforms not only provide funding and resource support in all growth stages of technology enterprises. Moreover, they integrate resources from all parties to provide enterprises with full-lifecycle financing services, promote effective matchmaking and interactions between scientific and technological innovation, and financial capital, and accelerate the transformation and industrialization of scientific and technological achievements. Taking "Guangdong Technology Financial" as an example, **Zhao Changwen** pointed out that by leveraging the power of Nebula Capital actively, Guangdong Technology Financial is committed to promoting the growth of technology startups. In addition, Guangdong Technology Financial is committed to deepening full-lifecycle support for enterprises, and developing industry-leading enterprises by extending, supplementing and strengthening the industry chain actively.

3、**投资对象硬科技化：为致力于关键核心技术攻关的科技领军企业提供强有力的金融保障。科技部副部长邱勇**强调，科技金融政策的制定和实施必须紧密围绕关键核心技术的突破，以满

足国家战略任务和要求。科创板开通 5 年来，首次公开募股（IPO）募资总额累计 9108 亿元，其中“硬科技”产业占比近 89%。**上海市政府副秘书长王平**提出，上海目前正针对“卡脖子”技术攻关和创新产品研发，形成覆盖科技企业研发、生产等各个环节的保障机制。**荷兰气候政策和绿色增长部工业可持续发展处长卡洛·范·达姆**提到，荷兰政府以 15 亿欧元的初始资金为基础，通过公共资金的引导和撬动，激励更多的私人资本投入到科技创新中，共同专注于清洁技术的研发创新。

(3) Hard technology-oriented investment targets: Strong financial support is provided to leading technology enterprises dedicated to key core technology R&D. Qiu Yong, Vice Minister of Science and Technology, emphasized that science and technology finance policies must be formulated and implemented closely around breakthroughs in key core technologies to meet national strategic tasks and requirements. Since the opening of the STAR Market five years ago, the total amount raised through initial public offerings (IPOs) has reached 910.8 billion yuan, in which “hard technology” industries account for nearly 89%. **Wang Ping, Deputy Secretary-General of the Shanghai Municipal Government**, proposed that Shanghai is tackling “stranglehold” technologies and developing innovative products, and has established a supporting mechanism covering all aspects of research and production of technology enterprises. **Carlo van Damm, Head**

of the Industrial Sustainable Development, Dutch Ministry of Climate Policy and Green Growth, mentioned that with an initial capital of €1.5 billion, the Dutch government encourages more private capital investment in scientific and technological innovation through public capital guidance and leveraging to focus on the R&D and innovation of clean technologies jointly.

二、当前科技金融存在的新挑战

2. Current new challenges in science and technology finance

一是现行管理运行体制难以适应未来发展需求。中国建设银行公司业务部资深副经理崔喜苏指出，金融进入科技，根本上是解决风险的问题，当前金融领域的管理运行机制需要进一步完善。**中信银行投资银行部总经理匡彦华**认为，当前科技金融的风险补偿和风担体系不够健全，实践中，风险分担基金事后的补偿与整个担保体系不完全兼容。**中国人民银行上海总部货币信贷调研部副主任王长元**提出，科技创新具有高风险、高收益的特征，科技金融需要进一步完善风险分担机制与利益分享机制。

First, the current management and operation system can hardly meet future development needs. Cui Xisu, Senior Deputy Manager of the Corporate Banking Department, China Construction Bank, pointed out that finance is introduced into technology primarily to solve the problem of risks, and existing

management and operation mechanisms in the financial sector need further improvement. **Kuang Yanhua, General Manager of the Investment Banking Department, China CITIC Bank**, thought that the current risk compensation and risk-taking system in science and technology finance is not sound enough, and in practice, subsequent compensation for risk sharing funds is not fully compatible with the whole guarantee system. **Wang Changyuan, Deputy Director of the Monetary and Credit Research Department, People's Bank of China Shanghai Headquarters**, proposed that scientific and technological innovation is characterized by high risks and high return, and the risk sharing and benefit sharing mechanisms should be further improved for scientific and technological finance.

二是"耐心资本"的成长环境亟待完善。王长元指出，面对科技创新的不确定性，金融机构往往有所顾虑，难以形成长期、稳定的投资。当前的市场环境必然导致耐心资金供给不足，投早、投小比例偏低，投资接力不足。**上海市科学学研究所副所长陈海鹏**强调了"耐心资本"在科技金融中的重要性，提出应充分利用大型商业银行子公司的资源，以激发其在长期投资方面的潜力。通过这种资本的注入，可以激励企业专注于长期价值的创造和核心技术的研发，为科技创新提供稳固而持久的资金支持。

Second, the growth environment for "patient capital" needs improvement urgently. Wang Changyuan pointed out that in face

of uncertainties in scientific and technological innovation, financial institutions often have concerns, making it difficult to form long-term and stable investment. The current market environment inevitably leads to the insufficient supply of patient capital, a low proportion of early-stage and small-scale investment, and insufficient investment relaying. **Chen Haipeng, Vice President of the Shanghai Institute for Science of Science**, emphasized the importance of "patient capital" in science and technology finance, and proposed that resources of subsidiaries of major commercial banks should be fully utilized to stimulate their potential in long-term investment. Through such capital injection, enterprises can be motivated to focus on the creation of long-term value and the R&D of core technologies, thereby providing stable and sustainable financial support for scientific and technological innovation.

三是面向未来的"金融+科技"复合型人才短缺问题突出。王长元指出，科技金融领域的从业人员不仅要懂科技，还要懂得预判科技市场前景。**王平**认为，科技领域的多样化和细分化意味着金融从业者需要对各个赛道的技术路径有深入的了解和认识。**上海未来产业基金总经理魏凡杰**提出，上海未来产业基金正积极寻求在深度孵化及科研探索方面拥有卓越能力和深厚认知的专家，不仅需要具备对前沿科技的敏锐洞察力，还应能够为企业提供战略指导和资源支持。**中国银行公司金融部副总经理赵楠**指出，目前科技企业涉及到近百个行业大类、近 1500 个行业小类，如何

在最短时间里面认知这些新兴行业、新兴赛道，金融机构整个体系专业队伍建设怎么与之相适配是需要解决的难题。

Third, the shortage of future oriented "finance + technology" interdisciplinary talents is prominent. Wang Changyuan pointed out that practitioners in the field of science and technology finance should not only understand technology, but also know how to predict prospects of the technology market. **Wang Ping** thought that the diversification and segmentation of the technology field means that financial practitioners should have a deep understanding of technological paths of different tracks. **Wei Fanjie, General Manager of the Shanghai Fund for Future Industries**, proposed that the fund is actively looking for experts with outstanding competencies and profound knowledge in deep incubation and scientific research exploration. They should not only have keen insights into frontier technologies, but also be able to provide strategic guidance and resource support for enterprises. **Zhao Nan, Deputy General Manager of the Corporate Finance Department, Bank of China**, pointed out that currently, technology enterprises involve nearly 100 industry sectors and nearly 1,500 industry subsectors, and how to identify these emerging industries and tracks quickly, and how to build professional teams that match them in the whole system of financial institutions are challenges to be addressed.

三、推动我国及上海科技金融高质量发展的建议

3. Suggestions for promoting the high-quality development of science and technology finance in China and Shanghai

截至 2024 年 6 月底，上海设立总规模 1000 亿元的三大产业母基金和未来产业基金，全市科技型企业贷款存量户 13.7 万家，贷款余额达到 1.24 万亿元。本次论坛开幕式启动了“上海未来产业基金”，总规模 100 亿元，未来将以政府投资引导的方式提振早期科技投资市场信心，促进创新源头的优秀成果转化为新质生产力。基于此，与会专家建议：

By the end of June 2024, Shanghai had established three major industry funds of funds and a fund for future industries with a total size of 100 billion yuan, and there were 137,000 existing loan science and technology enterprise accounts throughout the city, with a total loan balance of 1.24 trillion yuan. At the opening ceremony of the forum, the Shanghai Fund for Future Industries was launched with an overall size of 10 billion yuan. In the future, it will boost confidence in the early-stage technology investment market through government-led investment guidance, and promote the transformation of excellent achievements at the source of innovation into new quality productive forces. On this basis, the experts present suggested that:

一方面，完善我国科技金融生态，为“耐心资本”营造良好发展环境。陈海鹏提出，科技创新需要耐心资本的持续支持，未来需要在机制、渠道、模式上实现突破，政府科技布局要与市场投资机构形成战略接续，形成“财政科技投入引导+市场接力+社会资本涌入”的接续投资模式。**匡彦华**提出，对于更小、更早的初创型企业，需要更多发挥政府引导基金的作用，给予社会资本投入信心，撬动社会资本投入。**赵楠**提出，在重点的信贷领域、风险审批领域、授权体系等领域，应当出台相应的尽职免责机制。

On the one hand, improve China’s science and technology finance ecosystem, and create a development environment friendly to “patient capital”. Chen Haipeng proposed that scientific and technological innovation requires continuing support from patient capital, breakthroughs have to be made in mechanisms, channels and models in the future, and the government’s technology layout should be connected strategically with market investment institutions to create a continuing investment model of “guidance of financial technology investment + market relaying + social capital inflow”. **Kuang Yanhua** proposed that for smaller and earlier startups, more play should be given to the role of government guidance funds, and greater confidence created to promote social capital investment. **Zhao Nan** proposed that appropriate due diligence mechanisms should be introduced in key areas such as credit, risk approval and the authorization system.

另一方面，上海要率先探索构建全链条、全要素、全过程的科技金融服务体系。（1）上海应完善科技金融政策的服务矩阵，发挥多层次资本市场作用，强化“募投管退”全链条的支撑，加强保险对“卡脖子”技术攻关和创新产品研发的托底保障。（2）上海应瞄准前沿技术和未来产业领域，用好三大产业的母基金和未来产业基金，引导社会资本协同加强产业链的补链、固链和强链。（3）上海应培养和集聚复合型人才，通过智能化工具和专业人才的协同作用，为企业的持续创新和长期发展提供强有力的金融服务支持，促进全球人才资本技术等创新要素在沪集聚。

On the other hand, Shanghai should take the lead in building a full-chain, all-factor and full-process science and technology finance service system. (1) Shanghai should improve the service matrix of science and technology finance policies, leverage the role of multi-level capital markets, strengthen support for the whole chain of “fundraising, investment, management and withdrawal”, and enhance the underlying support of insurance for tackling “stranglehold” technologies and developing innovative products. (2) Shanghai should target frontier technologies and future industries, make good use of the three major industry funds of funds and the future industry fund, and guide social capital to strengthen industry chain supplementation, stabilization and enhancement collaboratively. (3) Shanghai should develop and gather interdisciplinary talents, provide strong financial service support for

the sustained innovation and long-term development of enterprises through synergies between intelligent tools and professionals, and promote the clustering of worldwide talents, capital, technologies and other innovation factors in Shanghai.

整　理：韩　彤、赵程程

Compiled by: Han Tong, Zhao Chengcheng

编辑：殷梦宇　　责任编辑：王　冰

Editor: Yin Mengyu　　Editor in Charge: Wang Bing

电话：021-53300806　　传真：021-64381056　　E-mail: wangbing@siss.sh.cn

Tel: 021-53300806　　Fax: 021-64381056　　E-mail: wangbing@siss.sh.cn

地址：上海市淮海中路 1634 号 3 号楼 102 室　　邮编：200031

Address: Room 102, Building 3, No.1634 Huaihai Middle Road, Shanghai　Postcode: 200031