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The Premier Global Society of Financial Executives

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THE PREMIER GLOBAL SOCIETY OF FINANCIAL EXECUTIVES

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Message from the Chairman

Dear IAFEI members,

Greetings from Beijing!

It is my pleasure to present to you the 51st issue of the IAFEI Quarterly, the first for 2022.

The first quarter of 2022 is still greatly affected by COVID-19 particularly the widespread of the Omicron variant. The spike in cases in some countries caused lockdowns and border closures.

The global roll-out of the COVID-19 vaccine expects to lessen the cases and achieve herd immunity with the hope of bringing the world economy back to its pre-pandemic level.

At IAFEI, we are moving towards the new normal. Last year, IAFEI had its World Congress in hybrid format hosted by our Mexican member institute, Instituto Mexicano de Ejecutivos de Finanzas (IMEF) on November 18 – 19, 2021 in Mexico City. The theme was New Economy: Private Initiative, Public Policies and Development. The Asian region conducted a webinar on Special Purpose Acquisition Company (SPAC) and its Annual IAFEI Asian Day in hybrid format hosted by the Vietnam member organization, Vietnam CFO Club (VCFO). I congratulate the host member organizations for the successful events.

The active Asian region headed by Tsutomu Mannari hosted another webinar on March 23, 2022 entitled From The Great Resignation to the Great Reimagination: What's Ahead in 2022 with the professionals from Deloitte Consulting as resource persons. A timely and well-presented sharing of research findings complemented by professional insights and experience, it was another learning encounter among IAFEI member organizations' constituencies.

For this year's world congress, we plan to hold it in November in Shanghai, China in a hybrid format. I am hopeful, we can get together and attend the world congress in person.

As early as now, I would like to thank all of you for your support and for ensuring the sustainability of our organization. I believe that we can surpass the many disruptions that have been in our midst. I encourage all to have a positive outlook and be continuing agents of change towards a sustainable world where understanding and progress will prevail.

We will continue to improve the services that IAFEI provides to member organizations by providing value proposition initiatives. I am excited to update you on the new programs soon. For any suggestions and comments, you may share it through the IAFEI Secretariat at mbvinluan.iafei@gmail.com and secretariat.iafei@gmail.com.

Thank you and all the best!

Sincerely,

XIAOJIANG PAN
Chairman

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A Company Guided by the Right Strategy

— Driven by Robust Innovation and Empowered by Professional Expertise

by Yanshun Chen, Chairman, BOE Technology Group Co., Ltd., and **by Zhihua Xie,** Beijing Technology and Business University

In March 2021, Professor Zhihua Xie, deputy editor-in-chief of China Management Accounting Review, conducted an online interview with Mr. Yanshun Chen, Chairman of the BOE Group.

ZHIHUA XIE: I am very pleased to have invited Yanshun Chen, Chairman of BOE, to the interview for this issue of China Management Accounting Review. As an editor of the journal, and a member of the BOE Strategic Advisory Committee, I have been following BOE's development closely. It is an outstanding high-tech company and has been growing at a fast pace in recent years.

In the past year, in particular, many firms have been facing challenges and uncertainties in several ways, but BOE moved forward against all odds and put in an impressive performance. So, Mr. Chen, please tell us what you did at BOE last year.

YANSHUN CHEN: As you have pointed out, many firms faced a lot of external challenges in 2020, including the spread of COVID-19 and the rise of anti-globalization sentiments, which has greatly aggravated instability and uncertainty. In response to these challenges, the central government proposed a new development strategy that focuses on domestic market while keeping connected with international markets.

BOE has reached important milestones in its development over the past year. As we put up a resolved fight against the pandemic, we also seized market opportunities as presented by the industry consolidation to further expand our business. We steadily occupied the first place in terms of the market share for mainstream display products, and BOE's business in intelligent systems has also grown rapidly. Overall, our net profit will grow by more than 150% year on year.

BOE has also made much headway in its product and technological innovation, with continued increase in high value-added products and hardware-software integration products, for a much better product lineup. In 2020, more than 9,000 patent applications were filed. More than 4,500 of them, over 50% of the total, were filed for key technologies, such as flexible OLED, sensing, artificial intelligence, big data, etc. In the meantime, BOE continued its efforts in management innovation and transformation. With the support of relevant authorities, we began to implement an equity incentive program as a further step to establish a professional and dedicated management team, with incentives based on market practices. We will also initiate a new round of innovation and reform in light of the company's strategic development plan, in order to put in place systems of operations and management that are agile and responsive, efficient and collaborative step by step. This will lay the foundation for us to achieve the goal of "a 100-billion-U.S. dollar innovative IoT (Internet of Things) firm with dominance in multiple market segments".

ZHIHUA XIE: This is a very impressive report card. BOE is now a leader in the semiconductor display industry. Looking back at BOE's growth and development over the years, what do you think are the most critical factors for your exceptional achievements?

YANSHUN CHEN:

BOE's growth since its establishment in 1993 has been a microcosm of China's semiconductor display industry, from its early years of development to a large and strong sector as it is today. BOE's achievements today are the result of our hard work as we have continuously built up our experiences over the years. In 2003, we set foot in the semiconductor display industry through an acquisition of Hyundai's LCD business, at a time when the domestic market was monopolized by foreign manufacturers in both products and technology. It was a difficult start. After the company had got through the early years of development and became more experienced in R&D, it moved into a track for sound growth. We have proved ourselves as the mass production of the first 6th generation TFT-LCD, the first 8.5th generation TFTLCD, the world's first 10.5th generation TFTLCD, and the world leading 6th generation flexible AMOLED. BOE has moved quickly in semiconductor display production with strategies for technology, production and market, which has helped attain its position as a global leader in display products.

We have always put technology and product innovation in the first place, as the company's first and foremost priority. We highly respect technology and have always maintained a high level of R&D investment. The current IoT and 5G applications have also brought unprecedented opportunities for business growth. I believe that a company must focus most of its efforts and resources on technological development and innovation, which are indeed the driving force for the growth of the business. We believe in the concept of open, collaborative, and winwin development, and will work for open innovation in both technology and applications. We'll make further efforts to achieve an integration of display technology with artificial intelligence, big data and other technologies, and pursue value for all parties through increased collaboration.

After years of innovation and development, we have already reached a high level of integration, with IoT becoming a major part of our capabilities for technological development, product development and manufacturing. As we solidify and enhance our strategic positions in a number of market segments for IoT applications, we have formed a "1+4" business structure through business model innovation and continuous R&D investment. Like an aircraft carrier group, it is led by the display business, with integrated development of Mini LED, sensors and solutions, smart systems, and smart medical devices.

ZHIHUA XIE: The blueprint of the "1+4" aircraft carrier business group can really bring a very promising prospect for BOE. From what you said, I understand that BOE has come to where it is today mainly because it has been committed to clearly defined strategic goals, and has never let up in its e orts to innovate.

YANSHUN CHEN: That's right.

ZHIHUA XIE: Let's talk about the "1" in the "1+4" structure, which refers to the display business. We know the fact that one out of every four displays in the world comes from BOE. Since its founding, the company has grown rapidly in size, and in 2019 it hit the RMB 100 billion in revenue. Since I have a finance background, I would like to focus a little more on financial management. What kind of a role do you think BOE's finance department has played in the rapid expansion of the display business, and in its steady improvement in performance?

YANSHUN CHEN: When we made the decision to go into the liquid crystal display business, we did it based on a study on the future direction of the industry and the trend of technological development. We quickly acquired overseas technologies and set up production lines, and seized opportunities to grow when businesses in general were declining during the global economic crisis. We have made continuous investment to expand our business and build up capabilities in key technologies. We now have expertise in different areas, developed through each and every project we implemented, including technology, customer base, supply chain, human resources, management, capital, etc. The display industry is technology and capital-intensive, and therefore every new project needs financing besides technology. The capital market is an important source of financing for us. In addition, our corporate finance department has played an important role, too. It has made positive eff orts to explore innovative models of financing and ensure reliable sources of funding, to support the implementation of important projects, and the deployment of acquired technologies in production for an innovation driven growth.

For nearly 28 years since BOE's founding, the finance department has been a solid underpinning and strong support to the company's growth in important stages. In addition to securing financing for strategic projects as I mentioned earlier, it also uses its expertise to support business operations. For instance, it contributed to the implementation of major (acquisition) projects with their professionalism and creativity. It works to ensure that the company's strategies are incorporated in operations, in its continuous efforts to contribute to the improvement of business and stable growth of the company. Another thing I want to mention is that I have always encouraged everyone to be openminded and get involved in business activities, regardless of their departments or positions.

This is what our finance team has been doing, which continues to assign talents to frontline business units. They play exemplary roles in different areas and have become outstanding and essential managers in relevant business departments.

ZHIHUA XIE: Display is indeed a business that needs big investment. You mentioned the need to secure financing. What did you do to ensure a sustainable, secure and steady cash flow for the company?

YANSHUN CHEN: You are right. It is important to have secure and steady financing, and it is the lifeline of an enterprise, I should say. We have often seen large companies running into difficulties because of cash flow issues. As a result, businesses were not able to operate or grow properly.

The first thing we need to do is to prevent risks before they happen. We often say that we need the right strategies to win, which means that the goals must be clearly defined, and the course of actions should be set properly. They must be incorporated into the daily business activities, so that the company stays on a sound and sustainable track as it operates and creates values. This is what needs to be done from the business perspective. For financial management, it needs to perform its function in support of the strategy. We have financing plans that are continuously updated. Based on the corporate development strategy, and the company's operational and financing needs, the financial team develops medium and long-term funding plans, and plans by year, month and even week, which are updated on a regularly basis. According to these plans, funding is assigned or distributed across the company in a rational manner, to make sure that it is effectively used for its purposes. In the meantime, these plans also serve as the basis on which the management makes informed investment decisions to ensure the implementation of the Group's development strategy.

The second thing we need to do is to continuously expand our sources of funding. BOE has been in good standing with both the capital and financial markets. We have, in particular, maintained strategic cooperation with the China Development Bank and a number of state-owned banks, which provide the financial support for the company's growth. Based on the different funding needs for new projects, acquisitions, and operations, we have corresponding financing plans and for each plan we try to secure favorable terms and conditions of loans such as interest rates and repayment plans.

In addition, debt is a risk that a fi rm must control in its operation. Let me show you one basic financial indicator we use: the debt-to-asset ratio. At BOE, this ratio has always been kept below 60%. Given its importance to business operations, it is, along with debt composition, an important factor to consider when we do any financing. For debt ratio, each new project at BOE must have basically 60% of the funding coming from our own resources, with the remaining 40% to be financed through loans. Such a setup will allow us to control the debt ratio, and thus have less repayment pressure. As for debt composition, we make sure there is a proper balance between debt financing and equity financing. In 2019, for example, we obtained approval for the issuance of a perpetual bond up to the amount of RMB 30 billion after a careful review of our business performance and our solvency. Bond market interest rate was at that time in a downward trend as a result of the on-going loose monetary policies at home and abroad. The bond will not only give us the funding for new projects, but will also help BOE keep a sound debt ratio through an optimized capital structure.

We have also put in place a centralized capital management system, with a dedicated department that conducts research and management for risks in policies, foreign exchange, credit, settlement, etc. This was done for the purpose of sound capital risk management and to ensure a balanced cash flow and efficient operation.

ZHIHUA XIE: I believe that every business would need such a system to support its operation. You mentioned earlier that the financial department tried new approaches in management accounting. Could you please tell me more about it?

YANSHUN CHEN: We have never ceased to innovate ever since we started in the display business. We have set up a customer-oriented mechanism and we have a more centralized and professional system of operation, with more emphasis on precise and lean management. The most important part of these changes is the establishment of management processes and systems that are in line with the development of the display industry. There is work to be completed for each quarter based on our strategic plan. In the first quarter, we conduct a review, among other things, of implementations in the previous year, including assessments of business performance, major projects and opportunities, and corrections will be made as necessary. In the second quarter, based on conclusions from the first quarter review, we will analyze existing and new business opportunities and develop objectives and plans for medium and long-term growth. Business plans will be made, as the foundation for the implementation of the strategies, and will be updated on a rolling basis. In the third quarter, we have an integrated action plan which contains tasks corresponding to each strategic objective in the Longteng Strategic Plan. In the fourth quarter, the integrated action plan will be further broken down to specific responsibilities, based on the balanced scorecard theory, and will be incorporated into specific operational objectives. The implementation will be monitored and updated on a quarterly basis.

BOE's comprehensive budget management is aligned with the general processes for strategic planning and execution, in a closedloop management system that covers the whole process from the adoption of the strategy to its final execution. Such a system will make sure that strategic objectives are achieved through cycles of comprehensive budget management. The strategy sets the course of action, and the budget allocates resources for the strategic goals, and monitors their execution to make sure they are effectively achieved.

For each of the strategic objectives, there will be a business plan that ensures its implementation, and quantitative mandatory targets are set in the budget. Each entity under the comprehensive budget management must put in place a well-designed system of accountability to ensure that budget responsibilities and performance indicators are matched with organizational responsibilities.
Each business unit has such a system depending on their specific functions, and they all follow a customer-centered approach for profitability. The strategic goals of the Group were converted into specific tasks to be implemented by organizations at different levels, and for key projects, they are evaluated for both their business performance and the completion of the tasks.

For implementation monitoring, we have adopted the approach of a weekly rolling budget. We have all seen target-based and performance-based management being used in many enterprises today, but these methods won't work without proper forecasting. While medium and long-term strategic planning may not be able to respond to the ever-changing market environment, rolling forecasting can reflect in real time the latest market trends and predicate the competitive landscape in the industry. It will help a business adjust its strategies in a timely manner in order to maintain its leading position and competitive advantage. Our finance department has therefore been using the weekly rolling budget and assessment approach since 2012 to enhance the whole process control. It has worked with the business units to roll out quarterly targets, develop project specific measures to track implementation, and improve operations continuously. We are still following this philosophy and using this important mechanism in our strategy and budget management.

ZHIHUA XIE: You have converted your strategy into specific targets. Each target is supported by its own budget and monitored on a weekly rolling basis. It is a complete management system that covers both the strategy and its implementation, and BOE's fast growth has a lot to do with it. For every new project, from the stage of implementation to operation, you have used a complete set of processes and methods. Could you please tell me about the role that financial management has played in all of these?

YANSHUN CHEN: We started with the first production line of 5th generation, and we are now running more than a dozen of lines. For every new project, we follow the "Three-Five Principle", a systematic approach at BOE for efficient and fast project implementation. At the same time, we also want to make sure each new project could do better by drawing lessons from the previous one. As for the role of financial management, we will first make sure that each project has the financial resources it needs, as I mentioned earlier, and we also put a lot of emphasis on project budget management. For new project feasibility studies, in particular, we will carry out continuous analysis of its expected revenue to ensure the ROE of the project. During project implementation, we exercise stringent budget control to make sure that each expenditure is made according to the budget, to reduce costs to the largest extent, and thus lower the burden for future operations. I will also request that the project team makes a post-investment evaluation to verify return on investment, and existing projects should also contribute to the cash flows of new projects.

When it comes to operations, we believe we need to make continuous eff orts to implement lean management and improve operational efficiency. This has been an important part of what we have done at BOE in the past two years. Our financial team has also been using some management tools to help achieve our goal.

The cost-volume-profit analysis is the basic method and tool that BOE uses to assess its operations. It not only contains a set of profit models, but also helps to set areas of responsibilities for achieving specific goals. Every indicator in the analysis is converted into an operating responsibility to be assigned to a specific department. The financial team, on their part, has made continuous efforts to improve the profit model as it is applied in business activities. This allows them to conduct more detailed assessment of product profitability at various levels and make an analysis of all the factors involved. The financial team will then present their recommendations along with the issues to the business units and other relevant departments through inter-departmental meetings, in an instrumental and leading role to help improve operations. In addition, the financial department has set up an innovation taskforce, which uses the basic rules of operation and their indicators to develop recommendations for cross-departmental actions to improve operational efficiency and implement lean management within BOE.

It has been proved that the above measures would generate a certain amount of profit and cash flow every year, contributing to the financial health of company. As BOE's business becomes more diversified, rules of operation would of course need to be more often "customized" to fit specific areas of business, for a "business and finance integration" and end-to-end management. The financial team has skillfully applied the rules of operation and built a profit model that accommodates the uniqueness of the industry.

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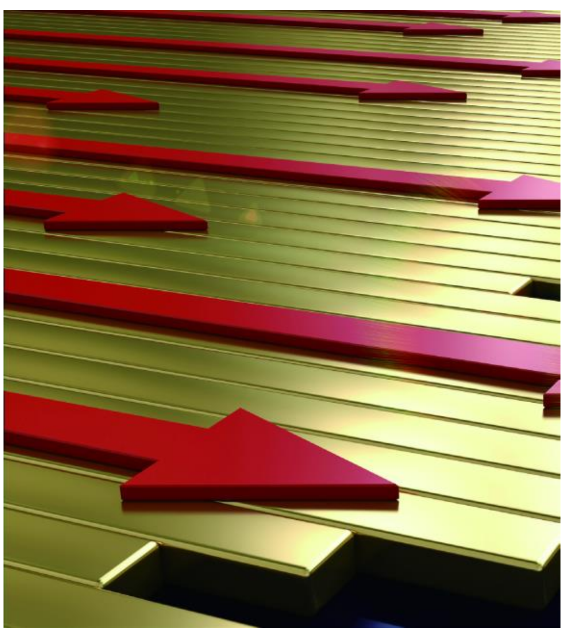

It has therefore played a catalytic role in operational improvement as it provides direct and effective support to decision-making in business.

As we focus on what we need to do within the company, we should of course also look at what other companies are doing. We put a lot of emphasis on benchmarking, which will give us the perspectives on profitability, products, technology, operating efficiency, cash flow and quality of operation. We will then be able to see our strengths and weaknesses in different areas, so that we can improve our own competitiveness as we move forward.

Another thing we have been doing is to maintain a big amount of R&D investment every year. We have a management mechanism for R&D investment too. In order to support the technological innovation of the entire company,

department has established a special technological innovation fund, which is managed separately and used exclusively for technological innovation. Financial resources needed for innovation is therefore ensured through the fund with its proper planning. In a project-based R&D organization, it may be difficult to do financial accounting. For example, the scope of project cost may not cover all the functions, and the project cost structure may not be clearly defined. This has made it difficult to properly determine the input needed for the project, and therefore the need of R&D management may not be satisfied. We have done internal investigation and built up a whole-process and full-cost accounting system for project-based R&D.

In order to analyze the cost structures at different stages of an R&D project, we have tried to apply the method of activity-based cost management in managing R&D costs, and track and analyze the entire process of a project, including the early-stage resources preparation, project initiation, project execution, and project completion. R&D drives BOE's innovation. In order to have a more solid innovation system with a higher input-output efficiency, we have adopted a comprehensive budget management mechanism that accommodates the special needs of R&D. This dedicated system for R&D organizations was set up on the basis of a similar budget management concept as applied at the corporate level. With such a mechanism in place, we'll be able to properly manage the use of the resources and evaluate their output.

ZHIHUA XIE: I have discussed with you and the company's financial team about your operational strategies before. It is an excellent example of management accounting in action. I understand that BOE's goal for the next 10 to 15 years is to move from a company with a revenue of 100 billion yuan to a 100-billion-U.S. dollar. So let's talk about the "4" in the "1+4" aircraft carrier business group. Please tell me more about BOE's future courses of actions, especially your strategy for the Internet of Things.

YANSHUN CHEN: Sure. The IoT ecosystem is a huge pie that gives people endless imagination. IoT is currently in a stage of rapid growth as it is applied in almost every aspect of our life. In 2020, people found themselves being isolated and separated because of the COVID-19 pandemic and other unexpected events, but this on the contrary has brought about huge opportunities and growth prospect for the Internet of Things given the fact that there are closer and more frequent connections between people and things and among things themselves.

In response to the new opportunities and challenges in this area, we continued our efforts to enhance our position in interface devices, and also help our partners build up their capacities. We have worked with our partners to build an enabling platform for the IoT ecosystem, with an integration of software and hardware technologies and more application scenarios. We will use the technologies we have developed for display, sensing, system devices, and our capabilities for intelligent manufacturing, in combination with artificial intelligence, big data, cloud computing and other technologies, to make major progress in three areas, i.e., interface devices, smart IoT systems, and smart technological applications in medical services.

In the field of interface devices, we will apply our core technologies for display, sensing and system devices to different scenarios in transportation, automobiles, homes, offices, safety and security, education, telecommunications, etc. in an integrated platform that covers the whole process of production from panels to modules, and then to complete systems and services. The best thing about this platform, I believe, is the fact that it accommodates all kinds of products and different segments of the industry, with strong capacity for system integration, and high competitiveness for its products. It provides a space for partners from different industries to work together for innovation and value creation.

In terms of smart IoT, we have launched the BOE Smart System Innovation Center, which contains five platforms for integrating and developing technologies of software and hardware, commercializing new material and equipment, marketing products and services, training and exchanging international talents, as well as strengthening cooperation for technology and market. We will focus our efforts on six major product categories including vehicle connectivity, smart retail, smart finance, smart medical engineering, industrial IoT, and smart urban public services. And our first priority would be making breakthroughs in the development of technologies and products that integrate software and hardware. Around these platforms and products, partners will work together to build the ecosystem, create opportunities, and share the value that is made.

We plan to build another 10-15 innovation centers across the country. The 5 major platforms in the innovation centers will give us the foundation to make major progress in the six major product categories. We will collaborate with our partners to develop software and hardware integration technologies by taking advantage of the industry investment fund and platform innovation investment fund. An entirely new model of win-win cooperation will be created thanks to the innovation centers with an open ecosystem for the benefit of the businesses, partners, products, and scenarios.

In the field of smart medical technologies, BOE has products that integrate the display technology, sensor technology, big data with medical and health services. BOE has so far worked with a number of hospitals in Beijing, Hefei, Chengdu and other places to promote digitalization in medical services. In the past 20 years, BOE has collaborated with Peking University Third Hospital to implement chronic respiratory disease management solutions, and has conducted in-depth cooperation with Air Liquide of France in the field of chronic respiratory diseases. We have built up Future Smart Wellness Communities with Alibaba Cloud, and deployed IoT solutions for chronic diseases management, smart first aid, smart wellness communities, smart health checkup, etc. We have made substantive progress in these areas.

ZHIHUA XIE: The market opportunities and prospects of the "Internet of Everything" are exciting. I believe that BOE will surely achieve breakthroughs in its efforts to apply its own unique technologies in different scenarios. You have alluded earlier to the opportunities that the pandemic has brought about, and we can all feel the impact it has on the world economy, businesses, and life styles. What is the impact the pandemic has had on the industries that BOE is involved in?

YANSHUN CHEN: There are challenges as well as opportunities. What we need to do is to turn crises into opportunities. The outbreak of COVID-19 in 2020 has also had an impact on the display industry. However, thanks to the supportive policies rolled out by the central and local governments, businesses across the industry have quickly resumed production, and the economy is coming back to normal. However, the pandemic reemerged in some countries, and we are now facing more complex international political and economic developments, and a more difficult external environment. Enterprises, therefore, should take actions and follow the dual-circulation economy initiative as they pursue their innovation and growth. I want to emphasize again that innovation remains the driving force to the development of industries and businesses.

The pandemic has led to changes in people's life styles, and this in turn caused an expansion of application scenarios for the IoT. The stay-at-home economy will last for a long period of time, which actually brings new growth opportunities to the industry. As a result, we could see rapid growth in applications such as online education, online entertainment, remote office, telemedicine, etc. Such development is in line with BOE's IoT transformation strategy. For example, we have professional medical display products and smart all-in-one conference systems that are introducing technological power into the fight against the epidemic.

ZHIHUA XIE: BOE has made impressive headway in both interface devices and smart IoT. As you implement your strategy for the transformation, what other creative activities do you think should take place in financial management?

YANSHUN CHEN: Under the transformation strategy, the company must have the management philosophies, models and processes that can support the transformation towards the Internet of Things. With continued progress in digital transformation, the financial department has also begun to introduce changes to its structure. They have quickly set up a financial service system that consists of the front, middle and back offices, with some of their functions shared and centralized. More and more talents from finance department are now involved in business activities, in a closer integration of business and finance. I have asked the financial team to do a few things: First, they must ensure the availability of resources. Second, they must be able to help with business activities. Financial personnel must work with the business units as their partners, to provide support to business. Third, they must be sensitive to market changes and possess the expertise to do comprehensive market analysis.

In order to assist business activities and contribute to the growth of the Group as a whole, the finance team must first obey their rules and do a good job in their traditional professional capacity in budget management, financing management, credit management, policy research, and in securing the necessary resources. Second, they must help achieve the goals of the "1+4" business structure. Under such structure, products, especially those related to IoT intelligent systems, should have the characteristics of fragmentation and customization, with constant iterations. They are produced with different cost structures and profit models. It is therefore necessary to enhance the management of each segment of the production process, with an improved process management system that focuses on the essential links, and uses digital management methods. In this process, financial personnel need to implement the project-based management system, and help create innovative business models. Financial data must be standardized through the use of the platform. Processes must be set up for the management of key issues in finance in a uniform financial management structure.

As the digital transformation continues, the financial team will run with a better personnel structure, with more people moving to the front offices to become professional BPs who can help with operations. Apart from their traditional role of support to the business units, financial staff will work side by side with business, to quickly respond to the customers and satisfy their needs and that of the market.

ZHIHUA XIE: I understand that BOE has achieved rapid growth in recent years in its smart medical technologies. What are the special things that financial management needs to do in this field?

YANSHUN CHEN: Technological applications in medical services is the very original thing that underpins the development of BOE's health and medical business. We are now using our technologies to create a model that supports the initiative for more efficient medical services, i.e. a more balanced system with clearly defined responsibilities, with a tiered structure for medical services. Healthcare is a highly competitive sector, too. Digital hospitals, in particular, need technologies and equipment for precise diagnosis and treatment. Financial personnel will also play a key role in this process. They must work with managers in each medical department to implement the initiative, and apply lean management for the whole process, in an effort to establish a management system for medical consortiums geared for the whole healthcare industry.

ZHIHUA XIE: When BOE was first founded, no one could expect that two decades later, it would become a global innovative company with three core businesses covering interface devices, smart IoT, and smart medical technologies. Its products and technologies are used in different industries and sectors and have become part of our daily life. To conclude this interview, could you please say a few words to envision the future of the industry?

YANSHUN CHEN: Looking forward, we know that times will change at a faster pace. BOE will remain committed to the idea of cooperation and collaboration for value creation, whether in interface devices or smart IoT. We will continue to implement a strategy that encourages collaboration in display products and the Internet of Things. We will work with partners from different parts of the world on a broader platform of cooperation, to build the IoT ecosystem, and create a better future for all!

ZHIHUA XIE: Excellent! Thank you very much for taking this interview and sharing your thoughts on the development of BOE and the industry together with strategies and financial management. They are all very valuable and thought provoking. Before we end our discussion today, let me express my best wishes to BOE as it continues its path of success and achieve its goal to become a 100-billion-U.S.-dollar company!

Yanshun Chen
Chairman, BOE Technology Group Co., Ltd.

Zhihua Xie
Beijing Technology and Business University

Silicon Valley Latest Technology and Investment Trends: Integration of Hardware and Big Data for Medical Device Industry

by David Chou, Chairman of Financial Executives Institute Chinese Taiwan & Asia Pacific Partner of Seraph Group in Silicon Valley

How to automatically collect digital data from smart & wearable medical devices anywhere and anytime is the trend of medical device in the Silicon Valley for the last few years. Such approach will not only save money, time, and human resources but also enhance data accuracy / readability / uniformity and diagnostic efficiency.

The smart and wearable medical devices automatically collect data anytime (beyond hospital operating time such as midnight or early morning) and anywhere (for people in the remote area / save time for people visiting hospitals for various check-ups).

Values of big data are more valuable than values of medical devices alone: Government, hospitals, pharmaceutical companies, insurance companies, medical device providers, and R&D institutes want to get such big data.

Artificial intelligence (AI) is used to real-time monitor and send alert signal automatically to save time and costs of medical professionals.

By using the smart and wireless medical devices, users also benefit a lot from (1) 24-hour monitoring services anywhere and anytime, (2) saving time, and (3) reducing medical costs.

Take Lucira for example. Lucira is the first USA FDA EUA authorized single-use home test kit providing PCR quality molecular accuracy for COVID-19 detection in individuals in 30 minutes.

Currently super majority of COVID-19 test kits are antigen or antibody based. Both tend to perform better only if a person has had symptoms for a few days. Currently PCR test, the gold standard to confirm whether a person has an active COVID-19 infection, takes longer time (anywhere from a few hours to a few days), longer processes (test sample delivered a large central lab), and needs a large specialized PCR equipment, whose cost ranges from USD 15,000 to USD 50,000. .

Currently when the test result of someone using antigen or antibody COVID-19 test kits is positive, that person needs to be quarantined and take a PCR test for confirm whether such person is infected or not. Once a sample is collected by a health care professional and sent to a large central lab, these PCR tests usually are conducted by a large specialized PCR equipment to run the test. The current test and confirmation process is troublesome (test kit + centralized PCR), time consuming, more costly, and capitals intensive (to buy large specialized PCR equipments).

The test kit-size Lucira solves all the above mentioned obstacles. Providing on-the-spot PCR quality molecular result, Lucira is able to

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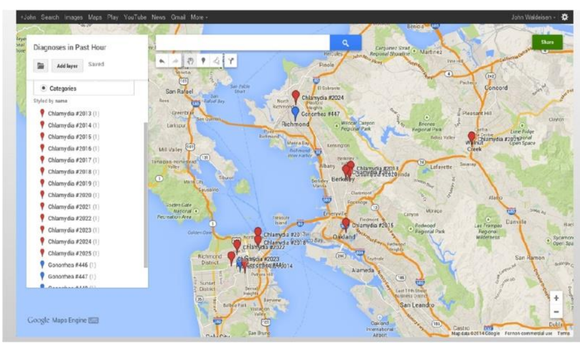
confirm whether an individual is infected or not in 30 minutes. Using Luicra is cheaper, more convenient, time saving, and does not need any large specialized PCR equipments.

Lucira's test kits also detect other virus related disease, such as influenza, AIDA, sexually transferred disease, etc.

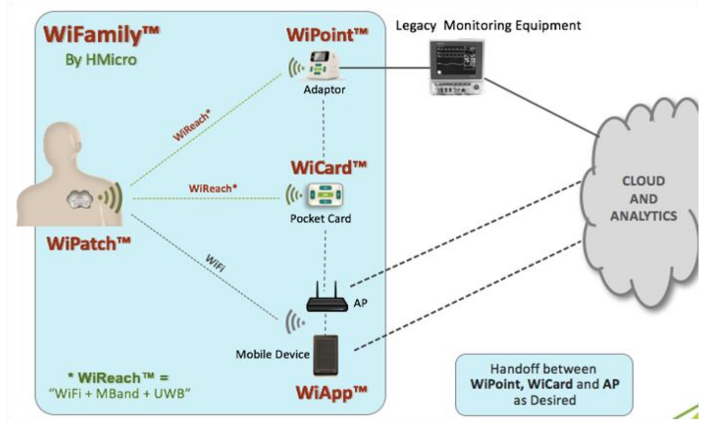
Most importantly, the test results, on no-name basis, and their respective location can be sent to a cloud database to result in a "Real-Time Disease Database", which shows the respective location of each case. Number and location of an outbreak will therefore be easy to be identified from the cloud based "Real-Time Disease Database". Government, hospitals, R&D institutes, pharmaceutical companies, insurance companies, and medical device providers need big data of such "Real-Time Disease Database", whose value is higher than the value of medical devices alone.



Eyeing the values and benefits of Lucira's product, Bill & Melinda Gates Foundation, Seraph Group (author David Chou serves as the Asia Pacific partner), Defense Advanced Research Projects Agency (DARPA), and Stanford StartX are also the early stage investors.

Samples of other medical devices integrating big data are:

- Zeto: Smart Wireless EEG Brain Wave Sensor
- Life Signals: Smart Wireless ECG Patch (Name Card Size)



- EKO: Smart Wireless Stethoscope

Hope there will be more smart & wearable medical devices to collect digital data anywhere and anytime. Such approach will not only save money, time, and human resources but also enhance data accuracy / readability / uniformity and diagnostic efficiency.

About Seraph Group (www.seraphgroup.net)
Headquartered in Silicon Valley, Seraph is world's largest structured angel fund group. Founded in 2004 with 12 funds and 120+ portfolio companies, Seraph has been supported by 400+ renowned investors such as:

- 3 Chairmen / CEOs of 3 large Asian technology groups
- AT&T Chairman / CEO / CIO
- Visa CEO
- GE Healthcare CEO
- Softbank China / India General Partner
- Merrill Lynch VC CEO
- Pfizer Consumer CEO
- Eric Ries (Book "Lean Startup" Author)

- Apple QuickTime Founder
- Hotmail Founder
- CNN Co-Founder
- WebTV Founder
- Viewsonic Founder
- Earthlink CEO
- Coca Cola CDO

Investor profile: executives (60%), entrepreneurs (30%), VCs and family offices (10%).

Seraph has achieved an average IRR of 28+% for recent funds. Follow-on investors of dozens of Seraph's portfolio companies include:

- Intel
- Founders Fund (GP: Peter Thiel)
- Sequoia Capital
- Softbank Group
- Amazon
- Alibaba
- Tencent
- Nikon
- Larry Page (Google Founder)
- Richard Branson (Virgin Group Founder)
- Y Combinator
- GSK
- Roche
- Pfizer

David Chou
Chairman of Financial Executives Institute Chinese Taiwan & Asia Pacific
Partner of Seraph Group in Silicon Valley

Funding the Sustainable Future: ACEN's Green Finance Leadership

by Cora G. Dizon, ACEN (AC Energy Corp.) Chief Finance Officer and Treasurer

The COVID-19 pandemic underscored the importance of climate change to all global markets, including the Philippines. As a result, ESG-focused strategies became important as key drivers of sustainability in so many ways across various businesses. The capital markets responded with innovative investment products that enabled the financing of more environmentally sound business ventures and, in our case, alternative sources of energy that contribute to meaningful reductions in carbon emissions, and a more sustainable future for our environment and the world. This drive toward purpose-driven capital made our group, AC Energy, one of the country's largest issuers of green bonds.

ACEN's Transformation

ACEN is the listed energy platform of the Ayala Group and one of the conglomerate's core value drivers. We are a major subsidiary of Ayala, at 64.7% ownership. Close to 90% of ACEN's portfolio is from renewable energy (RE) sources, giving us a unique position in the region as a significant Philippine RE play. Late last year, ACEN was included in the PSE Composite Index and the MSCI Philippines Index.

ACEN's transformation began with the acquisition of PHINMA's listed energy platform in 2019, which held close to 400 megawatts (MW) of assets in the Philippines. The following year, we completed the infusion of AC Energy's Philippine assets into the listed platform. We also acquired other operating assets and RE projects in various stages of development across the country. As a result, from being just a strategic partner in RE, we augmented our organic capabilities to scale up greenfield renewables projects. In a little over a year, our portfolio reached over 1,000 MW in attributable capacity.

In 2021, ACEN was able to raise US$28 billion from a Stock Rights Offering (SRO) in January, a private placement by Arran Investment, an affiliate of Singapore's GIC Private Limited, announced that same month, and a Follow-on Offering (FOO) in May. Both ACEN's SRO and FOO were oversubscribed, reflecting strong investor confidence in the company. Later that year, we completed the infusion of the rest of AC Energy's international assets into the listed platform, all of which are in renewables, unlocking even more value for equity investors. Finally, in September, ACEN guaranteed its maiden Fixed-for-Life Perpetual Green Bond worth US$400 Million, which was multiple times oversubscribed, at a low 4 percent coupon rate. These fund-raising initiatives and our company's aggressive targets supported our efforts to reach over 3,000 MW in attributable capacity at the end of last year.

At the core of ACEN's robust portfolio is renewable energy, which accounts for ~3,300 MW, or close to 90 percent of our attributable capacity, mostly in solar and wind. Sixty-four percent of our capacity is already operating. Forty percent of ACEN's portfolio is located in the Philippines, which remains our home market, where we have achieved an attributable capacity of 1,500 MW, 1,000 of which are in RE. On the other hand, all of ACEN's international projects are all from renewable energy sources. Most of our capacity is in Vietnam and Australia, where we see significant opportunities resulting from the economic growth-driven demand in the former, and the energy transition away from coal in the latter.

ACEN aims to be the largest listed renewables platform in Southeast Asia, or what we like to call LALIREPSEA. To achieve this, we aim to reach 5,000 megawatts in attributable renewable capacity by the year 2025. Now that ACEN is already halfway the goal, it is very likely that we will reach our targeted capacity earlier.

On top of the projects that are already under construction, ACEN is working on an ~18,000-megawatt pipeline, in various stages of progress, being developed organically and with partners.

Key Strategies

To achieve our targets, we have adopted a three-pronged strategy, based on renewable energy, regional expansion, and strategic partnerships. First, we are focused on scaling up our renewables portfolio, especially in the context of our Net Zero greenhouse gas emissions target by 2050. We aim to supplement our solar and wind portfolio with our initial forays into battery energy storage, which will improve the reliability of our solar farms in the Philippines and Vietnam.

In addition, we continue our expansion into both the Philippines and across the Asia-Pacific region, solidifying our position as a global RE player. Over half of ACEN's portfolio is based offshore, the highest percentage of any major listed Philippine energy company.

Finally, we leverage strategic partnerships with several distinguished global players to complement the company's internal competencies in building clean and reliable power projects. Although we are capable of pursuing such projects on our own, we continue to engage with strategic alliances to accelerate growth, especially when entering new, untapped markets.

Our Green Finance Journey

To finance our goals in the renewable energy sector, we have turned to the ever-expanding market for Green Bonds. As a group, our issuances in Green bonds have reached a total of US$1.6 billion U.S. Dollars, which are all listed on the Singapore Exchange (SGX).

In early 2019, as we were mulling over our long-term financing options, our CEO Eric Francia and I engaged in a thoughtful discussion on how best to pursue our bond issuances in a sustainable way. The timing was tight; issuing Green bonds would require certification processes that may take time. Although interest rates remained low, there were already concerns back then of slower global GDP growth and central banks were already considering rate hikes. However, we both agreed that having a Green bond was key to AC Energy's transformation because it would elevate not only our position, but also our philosophy and culture on the environment and sustainability.

The rest is history. In just three short years, the company had five issuances of Green bonds, taking advantage of the strong take-up of and favorable rates from these sustainable investment securities. Over time, ACEN's Green finance leadership was cemented in the Philippine capital markets, with the strong SRO and FOO subscriptions as mentioned earlier.

For our initial foray in 2019, we aimed for the Green Bond certification from the Climate Bond Initiative (CBI). We underwent a rigorous certification process performed by CBI and ESG ratings provider Sustainalytics.

AC Energy Finance International Limited (ACEFIL) successfully raised US$410 Million for its maiden CBI-certified senior dated five-year and ten-year green bonds. As anchor investors, we had the Asian Development Bank (ADB), and the International Finance Corporation (IFC), which further enhanced the relevance of our Green Bonds. Our issuance became the first publicly listed CBI-certified U.S. dollar-denominated Green bonds on the SGX. As a result, we put not only ACEN and Ayala, but also the entire Philippines, on the radar screens of ESG investors.

The same year, we issued another US$400

million in fixed-for-life (FFL) perpetual Green bonds. These were certified by the Philippine Securities and Exchange Commission (SEC) under the ASEAN Green Bond Framework.

Then, in 2020, AC Energy tapped US$60 million out of our US$1 billion Medium-Term Note Program for 5-year senior dated bonds. Later that year, AC Energy raised another US$300 million of FFL perpetual green bonds, also certified by the SEC under ASEAN standards. We also issued a tender offer for a portion of the bonds previously issued in December 2019 to manage our liabilities more efficiently, taking advantage of the favorable interest rate regime at that time.

Fast forward to 2021, ACEN, our listed platform, guaranteed US$400 million in FFL perpetual Green Bonds, also certified under the ASEAN Green Bonds framework by the SEC. Late last year, ACEIC pursued a tender offer and redemption at par of the remainder of the US$400 million in bonds issued in December 2019.

To maintain the consistent quality of our Green bond offerings across all AC Energy Group entities, and to signal our commitment to our ESG-focused investors, we developed our own Green Bond Framework for funding our eligible green projects to promote positive environmental and social practices in our core markets.

The Framework is founded on the four International Capital Market Association (ICMA) Green Bond Principles. These are: first, the use of proceeds from the issuance; second, the process for project evaluation and selection; third, the management of proceeds; and fourth, the company's reports of how the capital raised is being allocated. We apply these principles to our bonds and the projects to which the proceeds are deployed. First, we committed that net proceeds would cover eligible green projects, such as solar, wind, and geothermal power plants. Second, under the guidance of senior management, in-house specialists in business development, finance, and sustainability evaluate and select the projects, ensuring that these adhere to local environmental and social regulations. Third, in managing the proceeds, we put rigorous internal systems in place to track the capital flows, to establish policies for deploying unallocated proceeds, and only when necessary, to substitute assets. Finally, the company provides annual progress reports for senior management review and approval, which are assured by an independent external auditor to verify their adherence to the Green Bonds Framework.

Proceeds from the Green bonds were deployed into various ACEN renewables projects. As of last year, out of the proceeds from the bonds issued by ACEFIL, ~US$730 million or 74 percent has been deployed into renewable power projects.

ACEN's ESG Thrust

As part of our commitment to our anchor investors ADB and IFC, we issue annual reports containing key metrics to ensure that their investments meet ESG criteria. These include updates on the RE plants financed by the Green Bonds, tons of carbon emissions avoided, and even updates on gender inclusion and female empowerment activities in the communities we serve.

We also regularly report significant ESG metrics in our annual Integrated Report. ACEN has protected close to 1,100 hectares of forests, planted around 450,000 trees since 2019, and up-cycled 32,540 kilograms of plastic in 2020.

Our commitment to ESG principles drives what we do at ACEN. We have an Environmental and Social (E&S) Policy, which aligns our business with the U.N. Framework on Climate Change and the Paris Agreement, as well as the U.N. Sustainable Development Goals. At the core of the policy are threefold commitments: first, our transition to a low carbon portfolio and divestment of its coal plants by 2030; second, our aspiration for excellence in environmental management; and third, our commitment to protecting communities, including indigenous and vulnerable populations, that are affected by the company's operations.

To further strengthen our pursuit of a low-carbon portfolio across the group, in October 2021, ACEN committed to reach Net Zero greenhouse gas emissions by 2050 or earlier. We are working to transition ACEN's generation portfolio to 100% renewables by 2025, across both our Philippine and International platforms. To achieve this, we intend to spin-off or divest all thermal capacity by 2025 and become a pure renewable energy company in terms of generation output by then. In addition, with regard to ACEN's current sole coal facility, we are working towards its early retirement and just transition by 2040, fifteen years earlier than the end of its technical life. This is in line with ESG investors' concerns over the mere disposal of coal assets, which will continue to emit carbon emissions over a longer period of time in the hands of another owner. We are working on these commitments and can provide more details as developments arise.

In addition, we strive to achieve excellence in environmental management. ACEN continues to manage the Conservation Estate in Ilocos Norte, a 700-hectare forest protection program established in 2014. As of last year, ACEN has planted around 450,000 trees in the area, with the goal of planting 500,000 seedlings by 2023. In addition, through an agro-forestry program designed by experts from U.P. Los Baños, and with various training workshops to build their skills, local residents learn sustainable farming techniques. The Estate also promotes biodiversity, which had increased as birds and other wildlife return to the area with increased foliage.

ACEN's strategic thrust to fund a sustainable future continuously strengthens our leading position in the market. As a result of our active participation in Green finance, we are better equipped to expand renewable energy here in our home country and offshore, through our established access to a broader base of investors, including those focused on ESG. It took a great deal of collaboration and persistence to align the entire organization toward sustainability, ensuring that our initiatives are compliant with ESG standards, and tracking our ESG investors' expectations to achieve best practices and incentives.

Working towards a sustainable future entails a commitment, but it is worth all the effort. Therefore, it is for this reason that ACEN strives to lead the charge in the renewable energy revolution.

Cora G. Dizon
Chief Finance Officer and Treasurer
ACEN

How Management Accounting can Help Corporate Decision-Making in the Fight Against COVID-19

by Dingbo Xu, China Europe International Business School

As an unforeseen risk to the Chinese economy that has very strong shockwaves on business liquidity, the COVID-19 pandemic outbreak is both a test of businesses' manage ment accounting systems and a test of business managers' risk management and strategic decision-making capabilities. Risk and strategic management of the pandemic requires that business managers conduct scientific and integrated analyses that take into consideration both challenges and opportunities that their businesses would be involved with. This article uses business liquidity management and risk management as examples to discuss how management accounting theories and tools in business decision-making can be applied in the fight against the COVID-19 pandemic.

I. Major Issues in Liquidity Management During the COVID-19 Pandemic

(1) Macroeconomic policy. In the two years prior to the pandemic break, China adopted relatively tight macroeconomic policies. In response to the dual impacts of the pandemic and China-U.S. trade disputes, China introduced a series of loose monetary and fiscal policies in 2020. In terms of monetary policy, the central bank has increased money supply, and governments at all levels have encouraged banks to enhance financial support for smallsized and medium-sized enterprises. In terms of fiscal policy, the central government has introduced many measures to reduce business costs in various areas, including taxation, public utility expenses, five types of employer-paid employee social insurance and a mandatory housing fund. As reopening progresses, the government will launch "new infrastructure and other stimulus projects as well. Businesses should thoroughly understand these policies, make full use of them, and seize development opportunities while controlling operating costs.

(2) When the economic environment poses system-wide short-term risks, banks hate to see large numbers of business closures. Businesses should take the initiative to negotiate with banks to increase and restructure debt via loan extension, preferential interest rates, renewal without repayment, and additional loans. In recent years, due to changes in the government's financial policies regarding interest rate liberalization (which has intensified competition in the banking industry), the capital cost of banking services for small, medium and micro enterprises has dropped significantly, and banks have developed more incentives to support such enterprises. Contrary to many people's perception, the banking financing environment for small, medium, and micro enterprises is currently the best ever. Businesses should pay attention to banks new found preference for financing small, medium, and micro enterprises, and solve short-term liquidity problems through bank financing and reduce the overall cost of capital.

(3) Every crisis has its positive side. Sometimes, crises are needed to drive decisions that determine the future direction of a company and improve the company's long. term core competitive advantages. A crisis can force business managers to think hard and make strategic adjustments that are difficult to

Table 1 Guizhou Moutai Profit and Cash Dividend

Year	Dividend every ten shares (RMB)	Net profit (RMB Billions)	Cash dividend (RMB Billions)	Cash dividend/ net Profit Ratio
2009	11.85	4.312	1.118	26%
2017	109.99	27.08	13.88	51%
2018	145.39	35.2	18.26	51.88%
2019	170.25	41.2	21.39	51.9%

make under normal business conditions.

(4) When managing liquidity risks during the pandemic, businesses need to consider overall cost of capital. When faced with liquidity pressure, companies often resolve their short-term cash flow problems by transferring equity to other parties. Under normal circumstances, however, the cost of equity capital is much higher than the cost of debt capital, and the better a company is, the higher the cost of equity capital.

Guizhou Moutai Co., Ltd. went public in 2001 and raised RMB 2.244 billion in its initial offering. Since then, it has not raised funds through allotment, private placement, preferred shares, etc. Table 1 shows the company's four year profit and cash dividend data

Obviously, the cost of Moutai's equity capital is exceedingly high, and when corporate profits grow rapidly, the cost of equity capital also grows fast. It is important to point out that the cost of equity capital is mainly related to the company's business performance. Whether dividends are distributed or not is less relevant

(5) Liquidity is a comprehensive indicator of various business decisions. Liquidity management requires initiative and foresight, rather than attention only after a cash flow crisis occurs. Decisions affecting business cash flow include capital structure, asset structure, product structure, cost structure, investment decisions, and cash conversion cycle management. Some of these decisions are short-term, but many more are in long-term nature. Long-term decision-making requires that managers make correct judgments on future development trends the enterprise is faced with. Designing an optimal cost structure is a very good case in point. In addition to affecting a company's profit growth rate, cost structure also affects its short-term liquidity and its ability to cope with potential risks. When choosing an appropriate cost structure for an enterprise, managers must comprehensively consider the industry's expected future growth rate, volatility, and the enterprise's ability to handle risks.

(6) During the ongoing pandemic, many companies are faced with the crisis of cash flow shortage. But there are also quite a few companies facing the opposite problem - the potential investment inefficiency caused by excess liquidity. Rather than making investment decisions based on the availability of funds, a company's investment decisions must be based on its technological comparative advantages, the future growth of its lines of business, and complementarity between new and existing businesses. However, numerous empirical studies show that excessive free cash flows often lead to impulsive investment, and inefficient investment can cause huge opportunity costs.

(7) Finally, in modern economies, it is normal to see some companies being reorganized, acquired, or even liquidated. Every crisis can bring about the restructuring of some industries and the failure of some companies. Finding new strategic investors for companies under liquidity stress or even finding good buyers for them are options that may be considered. For many companies in serious predicaments, bankruptcy and reorganization may be the least costly options. Companies can significantly cut costs through renegotiating with creditors and staff to

reduce the burden of debts and operate more efficiently in the future. On August 27, 2006, the Standing Committee of the National People's Congress passed the Business Bankruptcy Act of the People's Republic of China. Sometimes a bankruptcy or reorganization is the best option for all stakeholders, including creditors, shareholders, and government and corporate employees. However, many companies and local governments are reluctant to use bankruptcy and reorganization as tools to deal with sunk costs, which ultimately leads to the waste of social resources.

II. Cash Conversion Cycle and Liquidity Management

Working capital (aka operating capital) is the net amount of the company's total current assets minus total current liabilities. Management of working capital is closely related to the management of a company's liquidity. When companies manage working capital, they generally focus on the following items:

- Accounts receivable and notes receivable
- Advance payment
- Inventory
- Accounts payables and notes payable
- Advance collection

Companies can use annual sales as a base to calculate the number of days each item takes up cash, and then calculate the total number of days in the Cash Conversion Cycle (CCC). CCC is an important indicator reflecting the efficiency and opportunity cost of working capital in business activities.

Let's first define the following turnover ratios:
Turnover ratio of accounts receivable = annual sales / average annual accounts receivable

Inventory turnover ratio = annual sales / average annual inventory

Accounts payables turnover ratio = annual sales/ annual average accounts payables

Using the same method, we can also calculate the tumover ratios of notes receivable, notes payable, advance collections and advance payments. Dividing 365 days by these tumover ratios we can calculate the number of days that cash is used or not collected for each item, with sales revenue used as the measurement base. It should be noted that calculation formulas for these turnover ratios are different from the definitions used in financial accounting in financial accounting, the numerator of the formula for calculating the turnover ratio of inventories and payables is the company's annual cost of goods sold, not sales revenue.

The CCC of a firm can be defined as:

CCC days = Turnover days for accounts receivable and notes receivable + Turnover days for advance payments + Turnover days for inventory - Turnover days for accounts payables and notes payable - Turnover days for advance collections

CCC days are the number of days that cash is tied up by the company's working capital, using sales as the base measure. The greater the number of days, the higher the opportunity cost.

The formula for calculating the opportunity cost of working capital is:

CCC cost = sales x cost of capital rate x (CCC days/365)

Assuming the cost of capital (or the opportunity cost rate) of the two companies is 10%, Table 2 lists the opportunity cost comparison between Sany Heavy Industry Co.. Ltd. and Haier Smart Home Co., Ltd. in the cash conversion cycle.

In 2008, the global financial crisis triggered by the

U.S. subprime mortgage crisis had a huge impact on Sany's business. The company's cash conversion cycle days increased from 106.8 days in 2007 to 339.7 days in 2015. The company's capital also rose from RMB 267.6 millions to RMB 2.1747 billions in 2015. Since 2013, interest than vigorously promote reopening Sany has strengthened the management of They continue to implement measures that working capital efficiency. As the company's are notably uneconomical in a cost-benefit business improved in the past few years, analysis. This is especially true for state-owned its CCC days dropped to 98 days in 2018. enterprises Compared with the number of days in 2015, In February 2020, a study report titled "Full this is equivalent to the company obtaining an Reopening of the Economy Is More Important interest-free loan of RMB 55.822 billion for Than Any Fiscal and Monetary Stimulus 241.7 days.

The first step in working capital management is to calculate the number of days that capital is spent for each operational item, and then calculate its opportunity cost, and use that as part of management's performance evaluation measures. Many companies attach great importance to the improvement of working capital efficiency and have achieved remarkable results. Haier Smart Home is an example. In 2018, the CCC of Haier Smart Home was less than one day, and the opportunity cost associated with working capital was only RMB 39 million.

III. Mechanism Design Theory and Corporate Risk Management

Full reopening of the economy is the key to solving the business liquidity crisis caused by the impact of the COVID-19 pandemic. However, in some provinces or regions, authorities actively promote reopening on the one hand and require corporate management to sign guarantees that no employees would be infected on the other hand. Due to continuous occurrence of infection cases imported both domestically and internationally, many business leaders feel a lot of pressure. To avoid political and performance risks, many would rather sacrifice their companies' economic interest than vigorously promote reopening. They continue to implement measures that are notably uneconomical in a cost-benefit analysis. This is especially true for state-owned enterprises.

In February 2020, a study report titled "Full Reopening of the Economy Is More Important Than Any Fiscal and Monetary Stimulus Policies" by Professor Daokui Li of Tsinghua University offered six suggestions, the fourth of which stated, "It should be made clear that during reopening, as long as businesses strictly follow scientific and standardized epidemic prevention and control protocols, local governments and businesses should not be held accountable for new cases that occur so that they would not be disincentivized from reopening due to the need to maintain minimum numbers of new cases". This is a particularly important suggestion.

Next, from the perspective of management accounting mechanism design theory, I analyze the potential problems posed by the requirement that companies sign guarantees of zero infection. Modern management accounting emphasizes the importance of establishing a scientific performance measurement system and incentive mechanism. One motto we often repeat in business school classes is that you

Table 2 Comparison of Opportunity Cost of Cash Conversion Cycle: Sany VS. Haier

Company/ Year	Sales revenue (RMB Million)	Days for accounts receivable, notes receivable and advance payment	Days for inventory	Days for accounts payables, notes payables, and advance collection	Days of CCC	Cost of CCC (RMB Million)
Sany 2007	9145	74.9	78.5	46.6	106.8	267.6
Sany 2015	23367	323	100	83.3	339.7	2174.7
Sany 2018	55822	136.4	62.9	101.2	98	1500
Haier 2018	183317	51.56	44.72	95.5	0.78	39

get what you measure. Much of the irrational behavior we often see in many companies is rooted in problems of their evaluation systems. The Wells Fargo Bank account fraud scandal is a typical example.

As the fourth largest bank in the United States, Wells Fargo placed great emphasis on the number of new customer accounts in its assessment of employees. In the decade before 2017, many employees of the bank created millions of fraudulent savings, checking and credit card accounts for customers without their consent just to meet aggressive performance target set by the bank. At the end of 2016, the scandal was discovered by regulators and caused the company's share price to drop sharply. On February 21, 2020. Wells Fargo agreed to pay a USD 3 billion fine to the U.S. Department of Justice. Regrettably, problems of this nature are quite common in China. Due to inadequacies with the performance evaluation system and incentive mechanisms, many government departments and stateowned enterprises often get business results that are contrary to the goals they set.

According to modern mechanism design theory, we should divide corporate risks into different types and take different measures to deal with different risks. One of the key factors is properly evaluating of and incentivizing those in the role of risk management

The first type of risks are external risks that are beyond the company's direct influence. They are often called the Unknown Unknowns. Those risks have very little to do with the company's strategic decision-making. They are very difficult to manage, because it's hard to predict how likely they would occur, in what form they may appear, and how much loss they may cause, and companies may not even be aware of their existence. Responding to such risks requires that managers take full advantage of their experience and make good use of their leadership skills, judgment, and adaptability. Companies need to establish a flexible and effective organizational structure and emergency response mechanisms. Once such risk occurs, it will act immediately to find ways to solve the problem and minimize loss. However, it is neither realistic nor wise to require business managers to sign a guarantee to ensure that such risks will not occur. One principle in the theory of management accounting performance evaluation is that a manager should not be held accountable for events beyond his/her control. In the current battle against the pandemic, a small portion of risks fall into this category.

The second type of risks is strategic risk, or the known Unknowns. To obtain better corporate returns and social benefits, companies and government departments need to constantly make new strategic decisions, such as new product research and development and whether to push for full reopening, etc. Such decisions entail new risks. This type of risk is not hard to identify and the probability of its occurrence and the consequences that come with it can be estimated. Managers can also influence the probability and consequences of these risks through strategic decision-making. Companies should take the initiative to manage such risks, establish good risk discovery, evaluation, and management mechanisms, learn and master relevant theories of risk management, and attach importance to the role of technological, financial and legal advisors. As with the first type of risks, we should not require decision makers to guarantee that such risks do not occur. Instead, we should ask them to make a scientific cost-benefit analyses, choose the decision that maximizes the expected net income, and determine the optimal probability of the occurrence of such risk. Two points need to be especially heeded:

First, here we refer to maximizing the expected (ex-ante) returns rather than expost returns. A decision that seems obviously erroneous after obtaining full information (after the fact) may quite possibly be the expected return maximization decision.

Second, when making a cost-benefit analysis of a company's decision for whether to reopen or not, one must consider both its impact on the company's revenue and costs and also its impact on society and other companies. This is what economists call "exogeneity".

One obvious fact is that once the company reopens, there will be the possibility of having cases of infection. It is therefore very unrealistic and unfair to require the legal representative or person in charge of an entity to sign and commit to a guarantee of zero cases of infection. Currently, leaders of enterprises and administrative departments in many provinces and regions implement extremely restrictive and conservative epidemic control policies that have brought about huge opportunity cost and long-term harm to the Chinese economy and society. The root problem of such an approach lies in the unreasonable evaluation standards.

The third type of risk is preventable risk, or the Known Knowns. This type of risk refers to loss caused by poor management and the illegal behavior of employees due to loopholes in the management system of an enterprise (or government department). Such risks are foreseeable, identifiable, and controllable. Enterprises need to make good their internal control and audit systems and attach importance to the construction of information management systems to effectively control occurrence of such risks. In the fight against the pandemic, it is necessary to require managers to ensure control of such risks.

Government officials and business managers should acquire some knowledge of mechanism design theory. Modern mechanism design theory emphasizes two conditions: the participation constraint and the incentive compatibility (IC) constraint. Participation constraint means that the expected benefit (utility) of an employee must exceed his minimum requirement when that employee accepts an employment contract. The direct consequence of an enterprise's evaluation system and incentive mechanism that does not meet the participation constraints is that the enterprise cannot recruit the employees it needs. This problem is now quite common in incentive mechanisms for top management of state-owned enterprises. Incentive compatibility constraint means that under an incentive contract, optimal employee behavior for a corporate entity is consistent with the employees' own interests.

Incentive mechanisms that do not satisfy incentive compatibility constraints often result in the following consequences: (1) Dishonesty: an unfulfillable guarantee will lead to deceptive behavior, which in turn brings great harm to the enterprise. This is also the reason why there exists widespread falsification of statistical data. (2) Damage to long-term corporate interests for the sake of meeting short-term goals. (3) Damage to the overall interests of other departments and of the enterprise as a whole for the sake of meeting departmental goals. Of course, these behaviors will eventually result in "bad money driving out good money", and high-quality employees would quit the firm. For this very reason, many domestic and foreign companies are now trying to separate the resource allocation function from the control function of their budget management systems.

Leonid Hurwicz (1917-2008), the founder of the modern mechanism design theory, was awarded the Nobel Prize for Economics in 2007, when he was 90 years old. He was professor of both economics and mathematics at University of Minnesota and he was one of my advisors when I was a PhD candidate at that university. Theory of mechanism design was my research thesis topic. Professor Hurwicz had strict requirements for students. On the night before I was to leave Minnesota for HKUST after graduation, he still required me to read some of his technically most difficult articles. I used to think that mechanism design theory was too abstract and difficult to apply to business management practice. However, in recent years, a few Chinese companies have launched some important and interesting management accounting innovations based on Hurwicz's theories. The partnership system now popular among companies in China is one such example.

In our fight against this global pandemic, I am now proud to promote my mentor's theories, in hopes that it will be useful to helping businesses not just survive, but thrive.

Dingbo Xu
China Europe International Business School

Updates from International Standards Setting Bodies

Focus on Assurance on Sustainability / Environmental Social and Governance (ESG) Reporting

Background

Globally, there is increasing demand from a broad range of stakeholders for organizations to provide transparency about their sustainability, including ESG matters. There is also a global trend whereby organizations are shifting from voluntary reporting to reporting in accordance with requirements mandated by jurisdictions. Sustainability matters may indicate how an organization has impacted the environment, people, and economy (and vice versa). These matters may also impact financial reporting, for example, asset impairments or restructuring efforts necessary to mitigate climate risk. Sustainability matters may also affect the organization's value, and therefore is receiving increased attention from investors, policymakers, and other capital market participants.

As organizations expand their reporting on sustainability matters, stakeholders are increasingly demanding assurance on this information, which is driving a call for globally accepted sustainability / ESG assurance standards that can be used by all assurance professionals. While the International Auditing & Assurance Standards Board (IAASB) has standards and guidance that already deal with this topic more broadly and are widely used, the IAASB strategic focus needs to be on:

• Being the globally recognized standard-setter for assurance on sustainability / ESG reporting.

• Focused actions to respond to global needs for specific assurance standards on sustainability / ESG reporting, which build upon existing IAASB Standards and guidance in a priority manner.

The Activities of the SACG / IAASB

In December 2021, the IAASB approved the Work Plan for 2022-2023, pending approval by the Public Interest Oversight Board (PIOB). The Work Plan indicates a commitment to a workstream on assurance on non-financial information. As a result, in December 2021, the IAASB established the Sustainability Assurance Consultation Group (SACG) to provide input and support to Staff and the IAASB in determining how the IAASB should respond to developments in sustainability / ESG reporting. Since the constitution of the SACG in December 2021, the SACG has held three calls.

In addition, in recent months, many key stakeholders have engaged with the leadership of the IAASB to discuss actions the IAASB is taking to address the assurance demand on sustainability / ESG reporting. Such stakeholders include the International Sustainability Standards Board (ISSB), Climate Accounting Project [which is supported by the United Nations (UN) sponsored Principles for Responsible Investment], the Financial Stability Board, the International Organization of Securities Commissions (IOSCO), the European Commission, the Committee of European Auditing Oversight Bodies, the Center for Audit Quality, the Global Public Policy Committee's (GPPC) ECG Committee, and the International Accounting Standards Board (IASB).

In March 2022, the IAASB will be discussing assurance on sustainability / ESG reporting. The objective of the discussion is to obtain the feedback on various considerations regarding

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assurance on sustainability / ESG reporting, which will inform the IAASB's further actions and a possible project proposal. In particular, the SACG is seeking the IAASB's views on the following:

(a) The topics (underlying subject matter), nature of information about the topics (subject matter information), mechanism for reporting (reports), and reporting standards (criteria) within the scope of the IAASB's work.

(b) The IAASB remaining neutral regarding intended users of any IAASB work product (recognizing the broad spectrum of users of sustainability / ESG reporting).

(c) The challenges in performing assurance engagements on sustainability / ESG reporting, and the urgency and priority of each challenge.

(d) The actions the IAASB should take in addressing assurance on sustainability / ESG reporting.

(e) The integration of sustainability / ESG information within the financial statements, including gathering observations about the prevalence of such integration, challenges and complexities this creates for the audit of financial statements, how auditors are currently dealing with such integration, and whether IAASB action in this regard is needed.

(f) The outreach and information-gathering the IAASB should undertake to solicit input from stakeholders.

Schematically, below shows the scope of IAASB's undertaking.

Scope of the IAASB's Work

Topics (Underlying Subject Matter)	Information Disclosed About the Topics (the Resulting Subject Matter Information)	Mechanism for Reporting (the Collation and Presentation of the Subject Matter Information)
• Climate, including emissions • Economic impacts, such as government assistance, tax strategy, anti-competitive behavior and market presence • Labor practices, such as diversity and equal opportunity and training education • Human rights and community relations, such as local community engagement, impact assessments and development programs • Water and effluents, such as water consumption and water discharge • Energy, such as type of energy and consumption • Biodiversity, such as impacts on biodiversity or habitats protected and restored	Depending on the criteria, information about the topics may relate to elements such as : • Governance • Strategy and business model • Risks and opportunities • Risk management or mitigation • Innovation to address risks and opportunities • Metrics and key performance indicators • Targets • Internal control over monitoring and managing risk • Scenario analysis • Impact analysis, including magnitude of impact	• Integrated report • Sustainability report • CSR report • ESG report • Annual report • Management commentary related to the financial statements

IAFEI is represented in the Consultative Advisory Group (CAG) for the International Auditing & Assurance Standards Board (IAASB). The foregoing is from the meeting materials of the CAG IAASB for March 8 & 9, 2022.

Corporate governance with a gender lens

by Ma. Aurora "Boots" D. Geotina-Garcia, President, Mageo Consulting, Inc., Philippines (originally published by BusinessWorld in its April 4, 2022 issue under the MAP Insights column)

In celebration of Women's Month, I had the privilege of speaking in a webinar organized by Women's Business Council Philippines (WomenBizPH) and the Institute of Corporate Directors (ICD). As a current and past member of the boards of both organizations which support the advocacies close to my heart — women's economic empowerment and corporate governance — the opportunity to speak on "Corporate Governance with a Gender Lens" could not have been more perfect. Allow me to share a few snippets from my talk.

SEX VS GENDER

Often times, the terms "sex" and "gender" have been used interchangeably. But it is important to understand that they are separate and distinct. Sex refers to biological differences between male and female. It is fixed, natural, unchanging, and consists of a male and female dichotomy. Gender, on the other hand, refers to the socially constructed roles, behaviors, norms, and attributes.

So, are females brains wired differently? According to a book entitled The Female Brain by Louann Brizendine, most aspects of male and female brains are similar — IQ averages are the same, and both are capable of excellence at physical, artistic, and intellectual pursuits. It also mentions differences: women tend to have faster and better fine-motor skills, as well as faster and broader verbal skills; women and men may come to the same answer in problem-solving tests, although they use different brain circuitry to find solutions; women have more neurons in the part of the brain devoted to emotions and to detecting emotions in order.

There are obvious differences between males and females observed in society and these are present from infancy through adulthood. Behaviors and school performance differences between men and women are strongly shaped by socialization at home, in school, in the workplace, and in media. Although 99% genetically alike, male and female brains have evolved and see the world through a unique lens. Gender cues such as "manly" and "ladylike" mold our abilities and behaviors, and most of the time, it is unconscious.

#BREAKTHEBIAS — THE UNCONSCIOUS BIAS

Insights from a book entitled, Invisible Women: Exposing Data Bias in a World Designed for Men by Caroline Criado-Perez uncovers how gender bias affects our everyday lives and examines different elements of the modern world that demonstrate the inconvenient consequence when "male" is the default form of humanity. Using "man" to represent all human beings is a subtle way of disregarding and alienating women — from policies, research, technology, transportation systems, product developments, and the media.

It further points out that industries and society in general fail to consider women's needs and create this "unintentional male bias" often masked as "gender-neutral."

WHAT DOES IT MEAN TO HAVE A GENDER LENS?

Gender Lens is all about recognizing and accepting the difference between males

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and females. Moreover, it is about taking conscious, deliberate, intentional, and proactive approaches in crafting an organization's corporate governance practices regardless of size, nature of business, operations, among others.

So, why adopt a gender lens?

Numbers matter: Women make up 50% of the local and global population, therefore accounting for half of potential consumers, suppliers, and talent pool. Women also drive up to 85% of consumer purchasing decisions, an important consideration in product development and formulation of marketing strategies.

Diversity = Innovation: Applying a gendered and diverse perspective brings unique ideas and a broader range of backgrounds. Moreover, diverse groups collectively possess more information and will have a higher chance of making better decisions.

Improved Company Culture: Companies with progressive policies provide a less stressful work environment and have lower employee turnover.

THE 5 Cs OF GENDER LENS IN CORPORATE GOVERNANCE

Driving diversity will not happen on its own. It needs concerted efforts to address cultural barriers that prevent women from attaining leadership roles. What do we need to do?

Change: A mindset change is needed in order to accept that gender inequality exists and needs to be addressed.

Commitment: Forward-thinking organizations are serious about diversity. Diverse boards are catalysts for equality and inclusion and are more likely to insist on fairness from pay to promotion.

Culture: Diversity matters where all perspectives are regularly elicited and valued. Business leaders need to establish a more egalitarian culture — one that elevates different voices, integrates contrasting insights, and welcomes conversations about diversity.

Clarity: The visible presence of business leaders can play a vital role to ensure that the positive shifts towards gender equality are not lost as organizations respond to the changes.

Compliance: The board should set the tone "at the top." This demonstrates the company's commitment to integrity and legal compliance and sends a clear message to all levels of the organization.

THE BUSINESS CASE FOR GENDER LENS

The World Bank Group cites that a broad set of business benefits is associated with gender diversity in corporate governance. It helps firms improve performance, drive growth, manage risks, attract and retain investors, and weather financial crises. Other benefits include improved financial performance and shareholder value, increased customer and employee satisfaction, rising investor confidence, and greater market knowledge and reputation. More companies are recognizing the value of boards that feature a mix of well-qualified male and female directors representing a range of perspectives, experience, and background.

Gender equality is a fundamental human right, and thus a gender lens in corporate governance is necessary in achieving a formidable, thriving, and sustainable world. The conversation about corporate governance with a gender lens and diversity is gathering speed. It is crucial to emphasize the role of gender equality and Diversity and Inclusion to drive innovation, business competitiveness and good corporate governance, as well as highlight the critical role of active and visible leadership.

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