

The FORTNIGHTLY

A Review of Middle East Regional Economic & Cultural News & Developments

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1. ISRAEL GOVERNMENT ACTIONS & STATEMENTS

1.1. Ministry of Finance Presents an Unprecedented NIS 80 Billion Bailout Plan

At press time, it was announced that Israel plans to spend NIS 80 billion (\$22 billion) to help the economy weather the coronavirus crisis. Finance Minister Kahlon said on 30 March that he expects a gradual return of business activity after the Passover holiday next month.

The Israeli economy has been hard hit by a government lockdown aimed at curbing the spread of the coronavirus. Increasingly stringent restrictions have largely confined Israelis to their homes, forcing businesses to close and causing unemployment to rocket. Initial restrictions reduced economic activity to 30%, forcing some of the public sector most of the private sector and to pause operations. Hundreds of thousands of Israelis have been placed on unpaid leave or fired, causing unemployment to skyrocket to over 23%. Finance Ministry Director Babad said last week that the deficit in 2020 will jump to more than NIS 100 billion (\$27.7 billion), compared with NIS 55 billion (\$15.2 billion) in 2019. Babad warned that the economic cost of a five-week shutdown would amount to some NIS 130 billion (\$36.4 billion) and that a 12-week economic lockdown would cost NIS 280 billion (\$78.5 billion).

On 30 March, Prime Minister Benjamin Netanyahu declared economic activity will be forced to slow even further, to 15%. In a televised statement that aired immediately after Netanyahu's announcement, Finance Minister Kahlon said the NIS 80 billion stimulus plan - representing 6% of Israel's GDP – provides massive funding to the healthcare system, struggling small- and medium-businesses, salaried employees and the self-employed. He added that "I'm aware that [the financial package] won't return the situation to what it was prior to the crisis. But we are speaking about the most substantial plan that the Israeli economy has ever seen. We will not allow the Israeli economy to collapse." (Israel Hayom 31.03)

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1.2. Jerusalem to Raise First-Ever 100-Year Bond

In view of the large-scale government assistance plan for dealing with the coronavirus crisis in Israel, it has been decided to raise debt on the international markets. Accountant General Hizkiyahu decided to issue State of Israel dollar bonds for ten, 30 and 100 years. In view of the large-scale government assistance plan for dealing with the coronavirus crisis in Israel, it has been decided to raise debt on the international markets including the first-ever 100 year bond. The issue is scheduled to take place shortly, following widespread consultation with foreign financial concerns, in the realization that demand for Israeli state debt is high among large investors around the world.

Israel's last debt issue in the dollar market was \$3 billion in ten and 30-year instruments in January 2020. The last issue in euro was €2.5 billion in ten and 30-year instruments in January 2019. According to the Ministry of Finance's announcement, Bank of America, Barclays Bank, Goldman Sachs and Citibank were selected as underwriters for the issue. Israel's credit ratings by Moody's, S&P, and Fitch are A+ Stable, AA- Stable, and A1 Positive, respectively. (Globes 31.03)

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1.3. Israel's High Court Allows Controversial Mass Surveillance Program to Continue

Israel's High Court has agreed to let the Shin Bet (Israel Security Agency) continue a controversial mass surveillance program aimed at tracking the movements of citizens suspected of carrying the coronavirus. The decision to lift an injunction on the program was reached after a Knesset subcommittee on clandestine activities was formed, providing oversight over the agency's methods.

Concerns over civil liberties and privacy rights have been raised after Prime Minister Netanyahu announced the course of action in mid-March in an effort to track down coronavirus carriers. The Shin Bet has vowed not to use their new authority to enforce quarantines, but instead notify individuals who have come in contact with possible coronavirus patients. The security agency uses cellphone data and other technologies to notify individuals who were within two meters, for 10 minutes or more, of someone infected with the virus within the past two weeks and immediately go into quarantine. (AFP 23.03)

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1.4. Tel Aviv Railway Electrification Work Speeds Up

Israel Railways is taking advantage of the stoppage of all trains due to the coronavirus lockdown to speed up electrification work in Tel Aviv. In the coming few weeks, electrification work should be completed between Tel Aviv Haganah Station and Tel Aviv Savidor Central Station. Completion of the electrification work on the new Jerusalem - Tel Aviv fast rail link between Yitzhak Navon Station in Jerusalem and Tel Aviv Savidor will mean that the Spanish contractor Semi, which is implementing the work, will be entitled to a payment of NIS 500 million.

Electrification of the rail network, which is predominantly diesel, is Israel Railways' flagship project. It will allow a substantial increase in the number of trains and passenger capacity while significantly reducing the level of pollution. Israel Railways says that as well as completion of electrification work to Tel Aviv Savidor Central Station, work is also in progress to electrify the line further north towards Herzliya as well as on the HaSharon-Ra'anana loop.

Electrification work has also begun on the line to Ashkelon where the operations depot is located for the electric carriages ordered from Siemens. The current timetable for completing all the electrification work is 2025. (Globes 30.03)

2. ISRAEL MARKET & BUSINESS NEWS

2.1. Axis Security Emerges from Stealth with a \$14 Million Funding Round

Axis Security has emerged from stealth with the announcement of a \$14 million series A funding round. The round was led by Ten Eleven Ventures with participation from Cyberstarts. Founded in 2018, Tel Aviv's Axis Security develops cloud-based cybersecurity technology to secure enterprise applications. Axis Security employs a team of 23 people, 18 of which are based in Israel. The company had previously raised a \$3 million seed round led by Cyberstarts. With the new funding round, the company had originally intended to double its team, but due to the Coronavirus pandemic and its economic effects, Axis Security may not meet its hiring target. All of the company's employees are currently working from home. (Axis Security 17.03)

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2.2. Convizit Closes a \$5 Million Seed Round Led by Pitango Venture Capital

Convizit announced the closing of a \$5 million seed round led by Pitango Venture Capital, with the participation of earlier investor, Jumpspeed Ventures. The funds will be used to double the size of the team, accelerate product research and development, and launch sales and marketing activities.

Convizit addresses one of the biggest challenges faced by online product and marketing teams: gaining complete and accurate visibility into user behavior patterns. This visibility is crucial for discovering ways to reduce friction, increase user engagement and maximize conversion rates. The importance of understanding user behavior patterns is evident in the size of this market: the product analytics market is projected to grow in size from \$6.9 billion in 2019 to \$13.9 billion by 2024.

The company's first offering, already in use by a number of large e-retailers, is a DaaS solution that effortlessly delivers complete behavioral data. This pre-tagged, context-rich data is ready for immediate use by data-driven enterprises to significantly improve the value of their existing systems, such as analytics, BI, A/B testing, marketing automation and personalization. This unique data also enables data scientists to achieve a never-before-available depth of funnel analysis, friction point identification, correlation/anomaly detection, user journey visualization and insight generation.

Jerusalem's <u>Convizit</u>'s AI technologies provide unparalleled visibility into user journey patterns, enabling companies to unlock the goldmine hiding in user behavior data. The company's top-notch data scientists and developers, led by two alumni of an elite IDF data-intelligence unit, are pushing the envelope of big data analytics and AI to usher in the next generation of product analytics. Large e-retailers, with millions of monthly sessions, are already using the company's initial offering to improve the user experience and business performance of their websites. (Convizit 18.03)

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2.3. Quantum Machines Raises \$17.5 Million as It Powers the Quantum Computing Race

Tel Aviv's <u>Quantum Machines</u>, creator of the first complete hardware and software solution for the control and operation of quantum computers, has secured \$17.5 million in funding to accelerate the already rapid adoption of the company's Quantum Orchestration Platform, which is driving the development of tomorrow's quantum breakthroughs. The Series A round was led by Avigdor Willenz and Harel with the participation of previous backers TLV Partners and Battery Ventures.

In the race to bring general-purpose quantum computers to fruition, Quantum Machines (QM) announced a major breakthrough earlier this year with the launch of its Quantum Orchestration Platform and its adoption by major players. Its complete set of features works with all quantum technologies, giving researchers and development teams everything they need to run the most complex quantum algorithms and experiments. Looking to the future, Quantum Orchestration lays the ground for tackling some of the

most challenging hurdles facing quantum computing, such as complex multi-qubit calibrations, quantumerror-correction, and scaling up to many hundreds of qubits. (Quantum Machines 19.03)

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2.4. Revuze Raises \$5 Million Series A for Customer Analysis Software

Netanya's Revuze, the first company to bring Artificial Intelligence (AI) to both brand and product management, announced a \$5.1 million financing round, despite the coronavirus crisis, with this new round the company has raised a total of \$12 million. Revuze is an Israeli market research company offering an all-automated customer opinions analyzer. Their product is built around a self-learning artificial intelligence and therefore unconstrained by human imagination, so it is able to go deeper than any existing product and provide data-driven insights never seen before.

The system can undertake a deeper and more significant analysis than any other product currently available on the market and provide insights based on data that it has not previously been possible to obtain. Assisted by Revuze, any business user can for the first time make decisions based on data without requiring the help of analysts, data scientists, information technologists, and the like. The company's flagship product Revuze Explorer scans millions of consumer opinions on a daily basis from a range of public and internal information sources and through machine learning, AI semantic analysis of texts, dividing and organizing all the information into the most relevant subjects for every brand and product. In this way, a company can receive immediate feedback about its products and brands and those of its rivals in real-time. (Revuze 25.03)

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2.5. El Al Halts All Passenger Flights

On 26 March, following an assessment of the situation, <u>El Al Israel Airlines</u> announced its decision to temporarily halt its passenger flights to and from Israel. This will continue until 4 April. The airline has stopped its flights to the few remaining destinations on its schedule classified as essential for the public. El Al said it made the decision because of the almost complete absence of demand for regular flights. Their concern is for the health of the passengers and the air crews, and the need to cut expenses at this stage until the crisis ends and recovery begins. El Al did carry out flights to rescue stranded Israelis from Delhi, India and San Jose, Costa Rica. The company also announced that it would continue its flights for bringing Israelis back from various destinations according to demand, and would also continue using passenger planes to transport cargoes. (El-Al 26.03)

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2.6. Via Raises Series E Financing to Expand Access to Public Mobility Worldwide

Via has raised a Series E financing led by EXOR. The financing values the company at \$2.25 billion and will enable Via to advance its vision of efficient, accessible, and equitable public mobility. Via's technology powers the next generation of public transportation, helping cities move beyond a system of rigid routes and schedules to a fully dynamic network. Via's algorithm efficiently combines, in real time, multiple passengers or packages headed in the same direction, significantly reducing urban congestion and emissions while providing a high quality and lower cost mobility service. Available in more than 70 cities in 20 countries, and growing rapidly, Via is the world's leading provider of technology-enabled public mobility solutions. To date, the Via platform has provided over 70 million rides around the world. Via's success has been achieved by working closely with its more than 100 partners across municipalities, public transit agencies, transportation operators, major corporations, schools, and universities to optimize their transport systems.

Leading Via's Series E financing, EXOR will invest \$200million in the company. New investors Shell, Macquarie Capital, and Mori Building also participated in the round, as did existing investors Pitango,

83North, Hearst Ventures, Ervington Investments, Planven Ventures, Broadscale Group, and RiverPark Ventures.

Tel Aviv's Via is reimagining how the world moves, from a system of rigid routes and schedules to fully dynamic networks. Via's mobile app connects multiple passengers who are headed the same way, allowing riders to seamlessly share a premium vehicle. First launched in New York City in 2013, Via's technology is now deployed globally, including in Europe as ViaVan. Today Via and ViaVan partner with over 100 public transportation agencies, private transit operators, taxi fleets, private companies, school districts, and universities, seamlessly integrating with transportation infrastructure to power cutting-edge mobility. (Via 30.03)

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2.7. Anagog Raises \$10 Million in Series C Funding Round

Anagog has raised an initial \$10 million in Series-C funding. The round was co-led by IN Venture, Israel's corporate venture capital arm of Sumitomo Corporation, part of Sumitomo Corporation Global Venture Group, as well as existing investor and VC firm, MizMaa, and is joined by Continental, the international automotive supplier, tire manufacturer, and industry partner.

The Series C investment will help Anagog bolster its global sales and delivery capabilities as well as leverage the funds to support the core R&D team - including several new product innovations that will be revealed in the coming months. As the industry currently grapples with unclear changes ahead, these additions will serve as the missing link needed to provide accurate views of real-time and real-world customer insight as they emerge out of the current crisis. At the same time, this will offer richer, contextual services that create a unique and enhanced user experience. It will be pivotal in further setting Anagog apart from competition and serving as a catalyst to disrupt the way companies reach and connect with their core audiences, now and in the future.

Tel Aviv's <u>Anagog</u> is reinventing real-world personalization. As a global pioneer of edge-AI, Anagog utilizes its JedAI suite of products to enable mobile phones to understand users' real-world behaviors (microsegments) and real-time context (micro-moments). Their patented privacy-by-design approach allows the phone to pull hyper-personalized and contextualized offerings from the marketer's cloud without disclosing the user's personal data. Accordingly, companies can craft the most personal customer experience for each individual customer and significantly increase engagement. (Anagog 31.03)

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2.8. TetaVi Raises \$4 Million to Bring Holograms & Immersive Media to New Sectors

TetaVi has raised a \$4 million series A round led by REDDS Capital. The investment will help the company leverage machine learning and AI in its development holograms and other 3D imaging. Immersive media — productions in virtual, augmented or extended reality — is creeping into advertising, gaming, sports and other sectors. TetaVi creates the 3D assets for this media, with a video production chain that includes a portable four camera studio. TetaVi says its holograms improve engagement levels for remote learning, training and communication, alluding to the current coronavirus context in which social distancing is the global order of the day.

Tel Aviv's <u>TetaVi</u> is an Israeli-based start-up developing a method and system to generate high quality Free Viewpoint Video (FVV) content for sports, broadcast and virtual reality applications to be viewed on all available screens – TV, mobile phone, tablet, laptop and VR/AR headsets. The startup's R&D team is headquartered in Tel Aviv. Commercial studios in New York, Los Angeles, and Tokyo run the client side of the business. (TetaVi 31.03)

3. REGIONAL PRIVATE SECTOR NEWS

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3.1. Rise Raises Seven Figure Investment Led by MEVP

Dubai-based Rise, a fintech startup focusing on democratizing access to essential financial services for the modest-income migrant population in the GCC, has announced that the company has raised a seven-digit investment. The funding was led by Middle East Venture Partners (MEVP) in partnership with Dubai International Financial Centre (DIFC) Fintech Fund, 500 Startups, Khwarizmi Ventures and Phoenician Funds. With the secured funds, Rise will expand its team, further develop it financial products and services, and increase its footprint to Bahrain and Saudi Arabia.

Launched in 2017, Rise is on a mission to bring the over 25 million migrant workforce in the GCC under the financial services network. The suite of services offered by Rise include the 'no minimum balance' bank accounts, remittances, consumer loans in both UAE and migrant home countries and bespoke insurance products. Since its launch in 2018, the platform has grown over 50% month-on-month and brought over \$125 million of annualized income into financial services sector.

During 2019, Rise signed several partnership contracts with financial service providers launching insurance partnership with Axa, cross-border unsecured loans in Philippines, the first 'pay-later' product in the GCC in partnership with Carrefour and a credit fund anchored by Astra Amco, one of the largest hedge funds globally and an early stage Rise investor. The Rise platform aims to bring its services to over a million migrants in the next 2 years and is targeting migrants from India, Philippines, Bangladesh and Pakistan. Besides, the company is already in discussions with several financial institutions in over 10 countries and expect to include new partners and products to their portfolio in the very near future. (MEVP 23.03)

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3.2. ZON Closes UAE's Largest Ever Seed Funding Round

ZON, the Arabian Gulf's first fully decentralized mobile-only e-commerce network, has closed its seed funding round at an unprecedented \$8 million, making it the largest recorded single seed round in the UAE. The seed round was led by ASA Ventures and a consortium of private investors looking to support the disruption of the e-commerce sector in the region and beyond.

ZON transforms traditional e-commerce by giving consumers access to the larger network of retailers across UAE and delivering orders via a decentralized fulfillment process and geo-tracking technology, ensuring lower prices, wider product range, and shorter delivery times while also decreasing the frequency of product returns because of pre-purchase stock validation. ZON also empowers the digital transformation of smaller retailers, giving them direct exposure to more customers by providing a plug-and-play mobile platform completely free of charge. With the aim making virtually every product available 24/7, across all locations in the emirates, ZON has already signed up over 32,000 sellers and over 17 million SKUs registered on its platform. The ZON customer app is scheduled for launch in the second quarter of 2020.

The UAE's ZON is the region's first fully decentralized mobile e-commerce network that will disrupt traditional e-commerce through in-situ order fulfillment, dynamic pricing and image-based pre-purchase stock validation, doing away with the need for cataloguing and large-scale centralized warehousing and packaging. Due it its unique model, the platform ensure the lowest price per item and faster delivery speed with advanced geo-tracking capabilities. ZON is an ASA Ventures-backed technology and e-commerce startup which began incubation in 2018. (ZON 26.03)

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3.3. Saudi Arabia's Online Grocery Platform Nana Raises \$18 Million in Series B Funding

Nana has raised investment from regional investors Saudi Technology Ventures (STV) and Middle East Venture Partners (MEVP). Other investors in the round included existing investors Impact46, Saudi Venture Capital Company (SVC), Watar Partners and Wamda Capital.

Nana is an online grocery platform that currently serves 14 cities across the Kingdom. The marketplace platform powers hypermarkets and helps them showcase their inventory to millions of Nana users. Buyers enjoy the luxury of sitting at home while a shopper prepares the basket and hands it to a delivery man to deliver the order. The technology allows users to get a constant overview of the progress during the order and nana users love the brand for the flawless experience. Nana has tripled its turnover during the past year and partnerships with Carrefour, Panda, Spar, Farm Superstores, Manuel and many others has helped Nana offer the widest possible range of consumer packaged goods (CPG) all over Saudi.

Riyadh's <u>Nana Direct</u> is constantly adding hypermarkets partners as well as boutique food stores to its repertoire. The Company aims to deliver a hundred thousand orders every month to Saudi-based buyers and aims to reach this milestone by the end of 2020. (Nana 25.03)

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3.4. Quant Secures \$1.2 Million in Pre-Series A Funding

Riyadh's Quant Data & Analytics, a technical start-up specializing in data science and providing data analysis and artificial intelligence services, announced that it has closed \$1.2 million in pre-series A funding. The funding round was led by Business Incubators and Accelerators Company (BIAC), with the participation of a number of regional angel investors. This round will enable Quant to strengthen its operational capabilities, particularly in the fields of research and development, create data and artificial intelligence-based products and solutions, expand its presence in the Saudi Kingdom and enter new markets.

Quant, one of the companies graduated from Badir Technology Incubators and Accelerators Program, offers a range of specialized products and services such as Fruits360, a cloud-based analytical application designed to provide companies with easy access to real-time analytical reports via instant integration with many databases and points of sale of companies in order to reduce risks, increase revenues and enhance decision-making.

Quant has developed new products and services for the real estate sector. The most important of which is an advanced platform that provides interactive indicator boards for the market and its movements and links them to geographic and demographic data of residential neighborhoods and key real estate indicators. It also provides advanced periodic analyses and reports that provide unique insights and updated trends on the real estate market, in addition to providing market research services and collecting data from dedicated sources, which in turn serve the needs and requirements of those interested in the real estate sector. (Quant 18.03)

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3.5. SecureMisr Acquired by Cysiv, a Trend Micro Group Company

SecureMisr announced it has been acquired by Cysiv, a US-based cyber security services company that was launched in 2018 by Trend Micro, a global leader in cyber security solutions. SecureMisr, as a Cysiv company, will continue to offer all of its current penetration testing, vulnerability assessment, security operation center (SOC), training and other related consulting services, in Egypt and the Middle East.

<u>SecureMisr</u> is a leading cyber security services provider, based in Cairo, Egypt and serving clients across the Middle East and Africa. SecureMisr was established in 2008 with the objective of delivering world class quality cyber security services to customers in Egypt and the Middle East. Ever since its establishment, SecureMisr has served as the trusted cyber security partner of Egypt's and the region's top banks, Telecom operators, leading enterprises and government agencies. SecureMisr has successfully delivered hundreds of security projects across the Middle East and Africa since its establishment and trained hundreds of

individuals in the various disciplines of cyber security, contributing heavily to raising the levels of security expertise across the region.

Texas based Cysiv was incubated within Trend Micro and launched in 2018. Trend Micro, a global leader in cybersecurity products, with over \$1.5 billion in sales and 6,500 employees worldwide, has been investing and hiring heavily in the Middle East – North Africa region and in particular in Egypt, over the past four years. Cysiv provides Security Operations Center (SOC)-as-a-Service to enterprises that need to better manage cyber risk by accelerating and improving the process of detecting, investigating and remediating threats, and of managing critical security controls. (Cysiv 24.03)

4. CLEAN TECH & ENVIRONMENTAL DEVELOPMENTS

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4.1. Israel's Air Pollution Falls by 30%

The Ministry of Environmental Protection reported the fall in economic activity in Israel, and in particular car journeys and public transport use, has significantly improved Israel's air quality. The concentration of nitrogen dioxide (NO2) in the atmosphere has fallen to 30% below average levels. The government's life-saving instructions, which have sought to flatten the infection curve and reduce social contact to allow the health system to cope with the spreading epidemic, have in particular significantly cut use of public transport and vehicle usage. Travel on public transport is down by 50% in Jerusalem, 60% in the greater Tel Aviv area and 85% in the Sharon area.

The Ministry of Environmental Protection's national air monitoring system examined the air quality data and compared them to the average in recent months. The results of the test show that concentrations of NO2 dropped by 10 micrograms per cubic meter to 35.5 micrograms per cubic meter between 1 January 2020 and 11 March 2020. The average concentration during 12 – 16 March 16 was measured at 25 micrograms per cubic meter, a 30% reduction. (Globes 19.03)

5. ARAB STATE DEVELOPMENTS

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5.1. Lebanon's Trade Deficit at \$820.5 Million in January 2020

During the first month of 2020, Lebanon's trade deficit totaled \$820.5 million, narrowing from the \$1.17 billion registered in the same month last year. Total imported goods retreated by 18% year-on-year (y-o-y) to \$1.2B. This may be attributed to the national foreign currency shortage, as the country grapples with an ongoing economic and financial crisis while the BDL covers the imports of essential goods. Meanwhile, Lebanon's total exports added 41.3% y-o-y to \$333.1M in January 2020.

Mineral products grasped the lion's share of total imported goods with a stake of 39.7%. Products of the chemical or allied industries ranked second, composing 10.9% of the total while Vegetable Products and Prepared foodstuffs, beverages & tobacco grasped the respective shares of 6.6% and 6.2%, respectively.

Compared to January 2019, the value of imported Mineral products climbed from \$263.9M to \$458.1M. Even though the imported volume of mineral products (mostly oil) only increased by an incremental 0.02% y-o-y, the price of international oil over the period grew by 5.7% y-o-y to \$63.7/barrel. In turn, the values of Products of the chemical or allied industries, Vegetable Products and Prepared foodstuffs, beverages & tobacco recorded the yearly downticks of 25.3%, 22.5% and 34.6% to settle at \$126.4M, \$75.7M and \$72M, respectively.

In January, the top three import destinations were Greece, Italy and Turkey, holding the respective shares of 9.7%, 9.1% and 8.9% of the total value of imports. It's worthy to note that China was historically a top importer, but the emergence of the first coronavirus case in China in December 2019 guickly evolved to

become a global outbreak. As such, the share of Lebanese imports from China significantly dropped from last year's 10.9% to 5.7% in January 2020.

For exports, Lebanon's top exported products were pearls, precious stones and metals grasping a share of 47.8% of the total. Base metals & articles of base metal and prepared foodstuffs, beverages & tobacco followed, with each grasping a share of 8.96% and 8.90%, respectively, of the total. The value of pearls, precious stones and metals climbed to \$159.1M in January 2020, compared to \$78.6M in January 2019. By the same token, the value of Base metals & articles of base metal and prepared foodstuffs, beverages & tobacco added an annual 58.7% and 9.2% to \$29.8M and \$29.7M, respectively.

The top three export destinations in January 2020 were Switzerland, UAE and KSA with the respective shares of 39.1%, 11.8% and 6.7%. (Lebanese Customs 27.03)

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5.2. Lebanon's Banks Halt Dollar Withdrawals after Virus Closes Airport

Banks in cash-strapped Lebanon have suspended dollar withdrawals until the airport reopens, a banking source said on 30 March, after authorities grounded flights to halt the spread of the novel coronavirus. The country's international airport in Beirut has been closed for almost two weeks as part of measures to stem COVID-19 in Lebanon, where at least 446 official cases and 11 deaths have been reported. The flight hub is to remain closed until at least 12 April, a date until which all non-essential workers have been told to remain at home across the country. A member of the Lebanese banking association, who asked to remain anonymous, said all dollar withdrawals would be halted "pending the airport reopening".

For decades, the Lebanese pound has been used interchangeably with the dollar at a fixed exchange rate of 1,507 pounds to the greenback. But a liquidity crisis had seen banks gradually restrict access to dollars and halt transfers abroad since the autumn, leading the value of the Lebanese pound to plummet on the black market. A dollar is now worth more than 2,700 pounds on the black market and prices have shot up in recent months, but the banks have maintained the old exchange rate. Those with dollar accounts are frustrated at their inability to take out most of their cash to exchange it at a better rate from unofficial money changers, with some banks before the recent dollar move already capping withdrawals at as low as \$400 a month. Lebanese banks stand accused of transferring millions of dollars abroad while preventing others from doing so after the start of mass protests against the political elite last October. (AFP 30.03)

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5.3. Lebanon Starts Negotiations with Investors and Presents a Recovery Plan

Lebanon's Finance Ministry held an investor presentation on 27 March to update the country's Eurobond holders on the government's economic plans and the principles for debt restructuring. On 7 March 2020, Prime Minister Hassan Diab announced that Lebanon for the first time will not pay a \$1.2 billion Eurobond due on 9 March and would seek to restructure its massive debt which reached \$90B in 2019.

The presentation is composed of 4 sections mainly covering the current Lebanese situation and developing a recovery plan that it hopes to finalize before the end of the year. The Lebanese economy faces an unprecedented economic and financial crisis. The presentation projects a GDP contraction of 12% for 2020 and a deterioration of the social indicators with a poverty rate of 45%, not taking into consideration impact of the Coronavirus outbreak. Moreover, inflation will rise to 27.1% fueled by the ongoing sharp depreciation of the Lebanese pound on the parallel market. Lebanon is witnessing a large fiscal deficit, which pushed the stock of public debt to an unsustainable high level. The rise in deficit can be mainly attributed to the to the very high interest bill paid by the government, though not mentioned is the high wage bill caused by excessive public sector hiring and pensions.

Lebanon's economy has traditionally relied on foreign direct investment and remittance inflows from the diaspora to sustain economic activity and fund the fiscal and current account deficits. Declining cross-

border capital inflows over the past few months have led the Banque du Liban (BdL, the central bank) to draw on its existing stock of foreign exchange reserves. In fact, according to the presentation, the BDL liquid foreign currency reserves reached \$22B in January 2020. However, the BDL figures put foreign currency reserves at \$29B. These conditions have weighted on the Lebanese banking. Besides, the presentation considers the size of our banking sector to be way above what is needed to fulfil its primary role of financing the development of a productive economy

The government announced a four-point agenda of structural reforms, fiscal consolidation, banking sector reorganization and debt restructuring. After restructuring the commercial Banking sector in terms of size and organization, banks should focus on providing credit to the real economy and most importantly separate the links between cash-strapped commercial banks and the central bank. On the fiscal level, the government will implement the Electricity Reform Plan to eliminate the deficit of Electricté du Liban (EDL). Moreover, the government aims to improve tax compliance. In fact, this will help realize the revenue potential of VAT and other taxes which would limit tax evasion and tax increases at higher rates. In term of debt, Lebanon's gross public debt reached \$90.35B in January 2020, of which \$31.31B of Eurobonds, \$57.07B of local T-bills and bonds and \$2B of Bilateral & Multilateral loans. (BLOM 31.03)

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5.4. UAE Lifts Restrictions on Certain VOIP Applications

The United Arab Emirates lifted restrictions on some programs that allow voice calls over the Internet, including Microsoft Skype for Business and Google Hang Out, to help people work from home and avoid spreading the coronavirus. Applications allowed on all networks in the country are Microsoft Times, Zoom, and Blackboard Applications compatible with fixed Internet networks include Microsoft Skype for Business and Google Hang Out. The applications are available until further notice, the Telecommunications Regulatory Authority said in a statement.

The UAE, where over 85% of the population are foreigners, blocks most applications that allow free voice calls over the Internet. The curbs have long been a grievance for expatriates who want to keep in touch with family and friends back home and work remotely. (AB 24.03)

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5.5. Saudi Arabia Forecasts Deficit at 9% of GDP Amid Oil Price Slump & Coronavirus

Saudi Arabia's budget deficit could grow to up to 9% of its GDP as a result of the ongoing coronavirus pandemic and falling oil prices, according to the kingdom's Finance Minister, Mohammed al-Jadaan. Earlier forecasts had projected that the deficit would be approximately 6.4%. Al-Jadaan said that the government has a contingency plan in place and flexibility due to spending cuts, borrowing and tapping reserves.

To combat the impact of the virus, Saudi Arabia announced a \$32 billion emergency stimulus package to help businesses and boost the economy. Measures to help businesses include exemptions and postponements of some government fees and taxes, as well as a \$13.32 billion package to help banks and SMEs impacted by the coronavirus. Additionally, Saudi Arabia's King Salman has approved raising the kingdom's debt ceiling from 30% to 50% of its GDP. (AB 22.03)

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5.6. Saudi Arabia's Budget Deficit Forecast to Widen to \$61 Billion on Virus & Oil Rout

Saudi Arabia's budget deficit is expected to widen to \$61 billion, which is nearly 8% of GDP, on the back of the coronavirus outbreak and its impact on global oil demand. New research from Jadwa Investment suggests the country's fiscal deficit will grow from the SR187 billion (6.4% of GDP) which was outlined in

the Ministry of Finance's budget statement last year. Jadwa said that it now viewed the budgeted SR833 billion revenue by the Ministry of Finance as being more realistic than previously thought.

According to Jadwa's calculations, government revenue will be slightly lower than that anticipated by the MoF, at SR791 billion while total expenditure is budgeted at SR1.02 trillion. Overall, it is worth noting that, at this moment in time, the range of potential effects of Covid-19 on the kingdom's economy are highly uncertain. Currently, the Saudi authorities have set up various precautionary measures to prevent further transmission, but, ultimately, this is only one side of the coin. The other side of the coin is that a prolonged and sustained outbreak of the virus globally could have a broad and lasting disruption to global trade and manufacturing output in 2020, which will inevitably act as a further drag on the local economy.

Latest full year GDP data for 2019 showed that the economy just about managed to record growth at 0.3%, but Jadwa expects this to improve significantly in the year ahead, to 6.3%, primarily as a result of sizable rises in yearly crude oil production. However, under the Public Investment Fund (PIF) program, Jadwa expects growth in the construction sector as a result of progress on mega-projects, whilst the combination of the Financial Sector Development Program and Housing VRP will help push growth in the housing and mortgage finance sector. The top crude exporter also faces plummeting oil prices, which slipped below \$30 a barrel this week for the first time in four years, on the back of sagging demand and a price war with Russia. (Jadwa 21.03)

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5.7. Saudi Arabia to Raise Oil Exports to Record Levels as Price War Rages

Saudi Arabia said it plans to raise its oil exports to a record 10.6 million barrels per day starting from May, escalating a price war with Russia. Oil prices are languishing at 17-year lows as the coronavirus pandemic threatens a global recession that will send demand plummeting. Saudi Arabia, the world's top oil exporter, which already announced a sharp production increase for April, said it will add additional supplies to the global market, deepening a glut.

Saudi Arabia had been exporting around 7 million bpd under an output reduction agreement among a 24-member producers' alliance known as OPEC+ which included Russia. Its Gulf neighbor UAE has also pledged to pump at least one million bpd more from next month. Riyadh said earlier this month it was raising exports to 10 million bpd in April after a production cut agreement among top producers flopped in early March. OPEC+ failed to reach an agreement on further production cuts to shore up sagging prices as the coronavirus hit the global economy hard. In an effort to grab market share, Saudi Arabia immediately announced a substantial increase in its production to 12.3 million bpd and exports to 10 million bpd at the beginning of April. The energy ministry said it will secure the increase from two sources, by using natural gas in the domestic market to free up oil for export and also as domestic consumption drops because of the coronavirus. (JT 30.03)

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5.8. Egypt's Cabinet Approves New Fiscal Year's Draft Budget

Egypt's cabinet has initially approved the FY2020/21 draft budget in its meeting held on 26 March. Minister of Finance Maait noted that the FY2020/21 draft budget aims at maintaining the country's financial stability and boosting economic activities through curbing the budget deficit to 6.3% from the GDP, in addition to attaining an initial surplus that will help reduce state debts. He added that it also targets boosting and stimulating growth and operations, especially in the productive sectors, along with infrastructure improvement efforts. The minister added that the new draft budget adopts specific initiatives and procedures aimed at improving citizens' living conditions, including medium-income classes and a positive contribution in enhancing human development activities in the education and healthcare sectors.

Moreover, it focuses on expanding further in adjusting commodities and services prices, expanding the tax base, and making use of state asset revenues through increasing surpluses transferred to the state treasury. The FY2020/21 draft budget targets reducing public debt to GDP ratio to 82.7% by the end of June 2021, which requires attaining a two% initial surplus from GDP in 2020/2021. It also targets to reduce deficit to 6.3% from GDP in 2020/21. Maait said the ministry is intensifying efforts to pursue revenue growth in higher rates than the annual disbursement growth, in addition to rationalizing spending to achieve public fiscal indices sustainability and raising spending efficiency on social protection and infrastructure, and basic services improvement.

The FY2020/2021 draft budget also includes allocations for pushing the economic activity, incorporating exports support with an increase of EGP 1 billion, domestic product promotion, consumption support, Upper Egypt development projects, and industrial zones servicing. Maait added that it includes allocations of EGP 36 billion for education, healthcare and social solidarity support initiatives. (Al Ahram 26.03)

6. TURKISH, CYPRIOT & GREEK DEVELOPMENTS

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6.1. Unemployment in Turkey Rose by Almost 1 Million in 2019

Unemployment in Turkey increased by almost 1 million in 2019, the Turkish Statistical Institute (TurkStat) announced on 20 March. TurkStat's labor market statistics for last year showed that there were a total of 4,469,000 unemployed people aged 15 years and older in Turkey, which was an increase of around 932,000 from 2018. Turkey's unemployment rate was 13.7% in 2019, a 2.7% rise compared to the previous year. Youth unemployment, in the 15 to 24 age group, reached 25.4%, an increase of 5.1% on the previous year. The unemployment figure for the general working population, aged 15 to 64, climbed 2.8% to reach 14%.

The Turkish economy contracted between Q4/18 and the second quarter of last year. Turkey's stumbling economy and rising unemployment fueled anger last year against the presence of Turkey's Syrian refugees, and many are resented by Turks as cheap labor taking over jobs and using services. The outbreak of the coronavirus will likely hit Turkey's economy hard, mainly through international trade and the tourism industry. Turkish President Erdoğan announced a \$15.4 billion aid package to help Turkey's economy cope with the impact from the coronavirus. (TurkStat 20.03)

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6.2. Bank of Greece Sees Zero Growth in 2020

The Bank of Greece's baseline scenario for 2020 is zero growth, compared with its previous estimate for 2.4%, according to a report released on 20 March. It estimates that the coronavirus will also hurt the state budget, reducing the primary surplus "by several percentage points of gross domestic product from the original target for 3.5%, although at the moment it is exceptionally difficult to make any precise forecast." The report is dominated by the economic effects of the Covid-19 pandemic. However, he gave a prospect of hope by giving his report the title "From the Crisis to the Pandemic and to Growth."

Greece's growth rate of the economy is expected to slow considerably in 2020, given the effects of the expansion of the coronavirus. For the time being, these consequences cannot be quantified with precision. At this stage, the baseline scenario provides for zero growth, as there will be a "significant negative impact on the economy in the first two quarters of 2020, which will be partially offset in the latter two quarters." This scenario takes into account the offsetting measures already taken.

On a fiscal level, the forecast that the primary surplus will come in far below the 3.5% of GDP target is, per the Bank of Greece governor's report, due to the increase in expenditure to tackle the epidemic, support for enterprises and the maintenance of employment, and the negative effects on revenues, due to the slowdown in growth. "The biggest challenge for fiscal policy today, changing the entire landscape, is to

make the most of all available options to secure the funding of expenditure for tackling the coronavirus and minimize the negative impact on the economy, with the least possible effect on debt sustainability." (Various 20.03)

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6.3. Athens Unveils Fourth Package of Measures to Support Economy

On 30 March, Athens announced a comprehensive package of measures for the support of businesses and employees affected by the coronavirus pandemic. Among the measures announced by Finance Minister Staikouras is the extension of a €800 million handout to a total of 1.7 million workers along with an extension of a moratorium of their debts to the state for 4 months. Staikouras added that protective measures will be extended to benefit a total of 800,000 affected businesses. They will benefit from a suspension of paying value added tax and debts to the state, Staikouras said, adding that a precondition for inclusion in the scheme is keeping all workers in employment.

As regards the Easter bonus, it will be paid in full to all employees of all businesses, Staikouras said, adding that the state will pay the bonus in the event that the workers are on temporary suspension. A scheme has also been devised to support some 700,000 self-employed professionals and owners of small businesses. Staikouras also heralded a supplementary budget to address the fallout of the virus, with €5.1 billion in additional spending for March and April alone and a total of €6.8 billion set aside for the response to the pandemic. (eKathimerini 31.03)

7. GENERAL NEWS AND INTEREST

*ISRAEL:

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7.1. For the First Time in 17 Years, the Sea of Galilee is Nearly Full

While Israel and the rest of the world have been focusing on battling the coronavirus pandemic, the Sea of Galilee has reached the highest level in years due to the heavy rains Israel received this past winter. As of 23 march, the water level currently was at -209.29 meters (687 feet below sea level), only 49 centimeters (19 inches) short of the Upper Red Line, the point at which a dam would have to be opened to prevent flooding, the Israel Water Authority reported.

The Water Authority has measured the water level of the Sea of Galilee, Israel's main freshwater source, daily since 1969. To date, the lowest level recorded was measured in November 2001, when the lake retreated to a level of -214.87 meters (705 feet) below sea level, a measurement which has come to be known as the Black Line. The last time the Sea of Galilee reached the Upper Red Line was the winter of 2003-2004. (Israel Hayom 23.03)

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7.2. Israel Ranks 14th Happiest Country in UN World Happiness Report 2020

On 20 March, the latest annual United Nations World Happiness Report for 2020 ranked Israel 14th internationally. The country slipped one spot from last year's survey and three spots from its 11th place finish in 2018, a rank it held consecutively for five years previously. The report ranks countries by how happy their citizens perceive themselves to be according to six key variables: GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity, and freedom from corruption. This year, 153 countries were ranked in the report.

Finland occupied the top spot for the third year in a row, followed by Denmark, Switzerland, Iceland and Norway rounding out the top five. The Netherlands ranked six, Sweden seventh, New Zealand eighth,

Austria ninth and Luxembourg closed out the top 10. Canada and Australia took the 11th and 12th spots, followed by the United Kingdom, just before Israel. The United States notched up one spot from last year to 18th place. The last spot for the least happy nation, 153, went to Afghanistan.

The UN's World Happiness Report has been released yearly since 2012 by the Sustainable Development Solutions Network (SDSN). The report is published yearly on the International Day of Happiness marked on 20 March. The document's editors address the current global pandemic, explaining that while they do not make forecasts about future happiness, crises of the past have "led sometimes to surprising increases in happiness in the wake of what might otherwise seem to be unmitigated disasters."

In addition to the country rankings, the report also – for the first time –ranked cities around the world by their subjective well-being. Tel Aviv came in at number eight, with Jerusalem at 33. The happiest city in the world, according to the report, is Helsinki, the capital of Finland, with the Danish city of Aarhus coming in second. Wellington (New Zealand) ranked third among the happiest cities and Zurich came in fourth with Copenhagen in fifth place. (NoCamels 22.03)

*REGIONAL:

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7.3. Expo 2020 Dubai to Consider Postponing Event by One Year

Expo 2020 Dubai will explore the possibility of postponing the event by one year in order to allow the world recover from coronavirus pandemic, organizers announced on 30 March. Expo 2020 said the BIE will now work with its member states and Expo 2020 Dubai organizers to establish a change in dates. The Bureau International des Expositions (BIE) is the intergovernmental organization in charge of overseeing and regulating World Expos, since 1931.

Many of the countries due to participate in Expo 2020 have been significantly impacted by Covid-19 and have sought a delay to the opening of Expo 2020 Dubai by one year, to enable them to overcome this challenge. Expo 2020 will follow due BIE processes on making the decision to delay. The UAE has decided to support a one year postponement. (AB 30.03)

8. ISRAEL LIFE SCIENCE NEWS

8.1. Pluristem's PLX Cells Cleared by Israel's Ministry of Health for Covid-19 Treatment

Pluristem Therapeutics announced that Israel's Ministry of Health (IMoH) has approved Pluristem's request to seek approvals to treat COVID-19 coronavirus patients under the per-patient compassionate use framework in Israel. The IMoH may approve proposed treatments on a per-patient basis for the use of PLX cell therapy including intra-muscular (IM) administration of PLX-PAD for the proposed treatment of severe pneumonia resulting from COVID-19 and preventing the deterioration of patients towards Acute Respiratory Distress Syndrome (ARDS) and sepsis. Pluristem has not yet submitted any such request for treatment of a specific COVID-19 patient, and there is no assurance that any such request will be approved by the IMoH.

Pluristem recently announced a collaborative agreement with the BIH Center for Regenerative Therapy (BCRT) and the Berlin Center for Advanced Therapies (BeCAT) at Charité University of Medicine Berlin to evaluate the therapeutic effects of PLX cell product candidates for the potential treatment of the respiratory and inflammatory complications associated with the COVID-19 coronavirus.

Haifa's <u>Pluristem Therapeutics</u> is a leading regenerative medicine company developing novel placenta-based cell therapy product candidates. The Company has reported robust clinical trial data in multiple indications for its patented PLX cell product candidates and is currently conducting late stage clinical trials in several indications. PLX cell product candidates are believed to release a range of therapeutic proteins in response to inflammation, ischemia, muscle trauma, hematological disorders and radiation damage. (Pluristem Therapeutics 17.03)

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8.2. Kitov Closes \$6 Million Public Offering

Kitov Pharma announced the closing of its previously announced public offering of 20,000,000 units at a price to the public of \$0.30 per unit, for gross proceeds of \$6 million, before deducting placement agent fees and other offering expenses payable by Kitov. Each unit contains one American Depositary Shares (ADS) and one warrant to purchase one ADS. H.C. Wainwright & Co. acted as the exclusive placement agent for the offering. Kitov intends to use the net proceeds of this offering to fund the development of its oncology drug candidates, acquisition of new assets and for general working capital purposes.

Tel Aviv's <u>Kitov Pharma</u> is a clinical-stage company focusing on advancing first-in-class therapies to overcome tumor immune evasion and drug resistance, to create successful long-lasting treatments for people with cancer. Kitov's oncology pipeline includes NT-219 and CM-24. NT-219 is a small molecule targeting the novel cancer drug resistance pathways IRS1/2 and STAT3. Kitov is currently advancing NT-219 in combination with cetuximab as a third-line or second-line treatment option for the treatment of recurrent and metastatic squamous cell carcinoma of head & neck cancer (SCCHN), as well as a single agent monotherapy treatment in patients with advanced solid tumors. (Kitov 17.03)

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8.3. Beyond Air Accelerates LungFit BRO COVID-19 Program

Beyond Air, a clinical-stage medical device and biopharmaceutical company focused on developing inhaled Nitric Oxide (NO) for the treatment of patients with respiratory conditions, serious lung infections, including those suffering from COVID-19, and pulmonary hypertension, as well as gaseous NO for the treatment of solid tumors, announced that the Company has drawn \$5 million from its previously announced \$25 million line of credit to provide the resources to more rapidly move the LungFit BRO COVID-19 program forward.

Rehovot's <u>Beyond Air</u> is a clinical-stage medical device and biopharmaceutical company developing a revolutionary NO Generator and Delivery System, LungFit that uses NO generated from ambient air to deliver precise amounts of NO to the lungs for the potential treatment of a variety of pulmonary diseases. The LungFit can generate up to 400 ppm of NO for delivery either continuously or for a fixed amount of time and has the ability to either titrate dose on demand or maintain a constant dose. The Company is currently applying its therapeutic expertise to develop treatments for pulmonary hypertension in various settings, in addition to treatments for lower respiratory tract infections that are not effectively addressed with current standards of care. Beyond Air is currently advancing its revolutionary LungFit in clinical trials for the treatment of bronchiolitis and severe lung infections such as nontuberculous mycobacteria (NTM), as well as for the potential treatment of COVID-19 patients. Additionally, Beyond Air is using ultra-high concentrations of NO with a proprietary delivery system to target certain solid tumors in the pre-clinical setting. (Beyond Air 18.03)

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8.4. Sight Diagnostics' OLO Deployed in Israeli Hospital to Support Coronavirus Measures

Sight and Sheba Tel HaShomer announced their new collaboration aimed at mitigating the risk of contamination by COVID-19. Sight's OLO blood analyzer will provide rapid FBC (full blood count) results in a dedicated lab within Israel's flagship government-run hospital, to process samples of infected patients who are being monitored and treated in a separate field hospital. Prior to deploying OLO for coronavirus patient testing, Sight ran a two-month evaluation at the central lab of Sheba Tel HaShomer, one of the top 10 hospitals in the world, according to Newsweek, and one of the biggest in Israel. The successful results led to implementing OLO for FBC testing.

Currently, OLO is being used for routine testing of Sheba's positive coronavirus patients. OLO's technology combines computer vision and AI to digitize each blood sample into more than 1,000 high resolution images. Sight is committed to providing rapid and accurate blood tests to aid health professionals in diagnosing and treating patients around the world. By applying technological innovation to blood diagnostics, Sight hopes to improve the ways in which healthcare professionals tackle the challenging effects of infectious diseases.

Founded in 2011, <u>Sight Diagnostics</u> aims to transform health systems and patient outcomes through accurate and pain-free blood diagnostic testing. Sight's technology, developed over almost a decade of research, represents breakthrough innovations in diagnostic methodology. Sight's latest blood analyzer, OLO, performs a Full Blood Count, the most commonly ordered blood test, in minutes. It's compact and designed to be used in a variety of settings. OLO creates a digital version of a blood sample by capturing more than 1,000 highly detailed images from just two drops of blood obtained from a finger prick or venous sample. These images are then interpreted by proprietary and fully automated AI algorithms. Sight's first product, Parasight, has been used to detect malaria in almost 1 million tests across 24 countries. (Sight Diagnostics 18.03)

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8.5. Protalix BioTherapeutics Announces Closing of \$43.7 Million Private Placement

Protalix BioTherapeutics has completed a \$43.7 million private placement of common stock and warrants. In connection with the offering, the Company issued 17,604,423 unregistered shares of the Company's common stock at a purchase price per share of \$2.485 and warrants to purchase an additional 17,604,423 shares of common stock at an exercise price of \$2.36 per share. Net proceeds to the Company from the private placement are expected to be approximately \$41 million, after deducting advisory fees and other estimated offering expenses. Rosario Capital and Houlihan Lokey Capital served as financial advisors in the private placement.

The Company intends to use the net proceeds from the financing to advance the Company's clinical programs of PRX-102, the Company's product candidate under development for the treatment of Fabry disease, as well as to further develop its early stage pipeline of therapeutics, and for general corporate purposes.

Carmiel's <u>Protalix</u> is a biopharmaceutical company focused on the development and commercialization of recombinant therapeutic proteins expressed through its proprietary plant cell-based expression system, ProCellEx. Protalix was the first company to gain U.S. FDA approval of a protein produced through plant cell-based in suspension expression system. Protalix's unique expression system represents a new method for developing recombinant proteins in an industrial-scale manner. (Protalix BioTherapeutics 18.03)

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8.6. BiomX Discloses Acne Pre-clinical Data Planned for 2020 AAD Annual Meeting

BiomX disclosed pre-clinical data from its acne program, originally planned to be presented at the Annual Meeting of the American Academy of Dermatology (AAD) in March 2020 before the conference was canceled due to ongoing COVID-19 pandemic concerns.

BiomX is developing BX001, its lead product candidate, to modify the appearance of acne prone skin. BX001 is a topically administered gel comprised of a cocktail of naturally occurring phage targeting Cutibacterium acnes (C. acnes), a bacterium implicated in the pathophysiology of acne vulgaris. The preclinical data disclosed include in vitro results demonstrating BX001's activity against C. acnes, including antibiotic resistant clinical isolates of C. acnes, and BX001's ability to penetrate biofilm, a matrix secreted by the bacteria which makes them less accessible to antibiotics. Phase 1 data from a cosmetic clinical study of BX001 in acne prone skin are expected by the end of the first quarter of 2020.

Bacteriophage, or phage, are viruses that target bacteria and are considered inert to mammalian cells. Phage are designed to target and kill specific bacterial species or strains without disrupting other bacteria or the healthy microbiota. All of BiomX's phage-based product candidates derive from its proprietary platform, which is first used to discover and validate the association of specific bacterial strains with human diseases or conditions, and is then used to develop rationally-designed phage combinations ("cocktails") of naturally occurring or synthetic phage to target pathogenic bacteria. The phage cocktails contain multiple phage with complementary functions optimized through in vitro and in vivo testing.

Ness Ziona's <u>BiomX</u> is a clinical-stage biotechnology company developing both natural and engineered phage cocktails designed to target and destroy bacteria that affect the appearance of skin, as well as harmful bacteria in chronic diseases, such as inflammatory bowel disease (IBD), primary sclerosing cholangitis (PSC), and colorectal cancer (CRC). BiomX discovers and validates proprietary bacterial targets and customizes phage compositions against these targets. (BiomX 20.03)

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8.7. Kryon Provides RPA Solution for Maccabi Healthcare Services' COVID-19 Response

Kryon announced the rapid development and implementation of a large scale data RPA process which integrates Maccabi Healthcare Services' testing of COVID-19 with the Israeli Ministry of Health. The implementation enabled the automation of a critical process and the accurate, efficient and prompt treatment of hundreds of Coronavirus patients.

One of the largest non-profit health maintenance organizations (HMOs) in Israel with 2.4 million members, Maccabi is on the frontline of the country's response to the COVID-19 pandemic. Twice daily, the Ministry of Health delivers detailed files with confidential test results of Maccabi patients, but the manual uploading of these documents was creating weeks-long backlogs and a mass of human errors. Spearheaded by Maccabi's CIO, Kryon was able to automate this process within 48 hours, helping to efficiently and quickly improve care. The rapid uploading of critical and sensitive data is now highly accurate, eliminating the opportunities for human error that existed during manual upload. Kryon is committed to helping fight the spread of the COVID-19 pandemic and will make the process available to any healthcare service or government organization free of charge.

Tel Aviv's <u>Kryon</u> is a leader in enterprise automation, offering the only platform on the market which encompasses both Process Discovery technology and Robotic Process Automation (RPA). The Kryon Full-Cycle Automation solution maximizes ROI and cuts RPA implementation time by up to 80%. Powered by proprietary AI technology, Kryon Process Discovery™ automatically generates a comprehensive picture of business processes, evaluates them and recommends which ones to automate. (Kryon 24.03)

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8.8. Corteva & AgPlenus Collaborate for the Development of Novel Herbicides

Wilmington, Delaware's Corteva Agriscience, a leading pure-play agriculture company, and AgPlenus announced that they have entered into a multi-year collaboration for the development of novel herbicides. The collaboration will combine Corteva's strengths in crop protection product discovery and development with AgPlenus' expertise in designing effective and sustainable crop protection products using predictive biology. By leveraging their complementary expertise, Corteva and AgPlenus will address the rise of global weed resistance, created in-part by the absence of new modes of action (MoAs) for weed control over the past 30 years. Successful products resulting from the collaboration will enter a multi-billion-dollar market.

Under the terms of the agreement, Corteva will apply its extensive crop protection research and development expertise, and AgPlenus will apply a robust computational platform to optimize several of AgPlenus' chemical families. Such chemical families have already been validated for herbicidal activity and are connected to new MoAs. Corteva holds an exclusive license from AgPlenus to commercialize herbicides based on these chemical families. Additional financial terms of the collaboration were not disclosed.

Rehovot's <u>AgPlenus</u> is designing effective and sustainable crop protection products by leveraging predictive biology. The Company aims to develop crop protection products: herbicides, insecticides, fungicides and crop enhancers. AgPlenus is a fully owned subsidiary of Evogene. <u>Evogene</u> is a leading company in leveraging computational biology to design novel products for life-science-based industries. Leveraging Big Data and Artificial Intelligence while incorporating a deep understanding of biology, Evogene established its unique technology, the CPB platform, to computationally design microbes, small molecules and genes as the core components for life-science products. (AgPlenus 25.03)

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8.9. VBL Positive Outcome in the OVAL Phase 3 Ovarian Cancer Pivotal Study

VBL Therapeutics announced an encouraging outcome of the planned interim analysis in the OVAL study, a double-blind controlled potential-registration study in patients with platinum-resistant ovarian cancer. The OVAL independent Data Safety Monitoring Committee (DSMC), reviewed un-blinded data and assessed CA-125 response, measured according to the GCIG criteria, in the first 60 enrolled subjects evaluable for CA-125 analysis. The DSMC confirmed that the study met the interim pre-specified efficacy criterion, of an absolute percentage advantage of 10% or higher CA-125 response rate for the VB-111 treatment arm, and recommended the study continuance.

In the previously reported Phase 2 study of VB-111 in platinum resistant ovarian cancer, 58% of the patients treated with VB-111 and paclitaxel demonstrated a CA-125 response. Those patients with a CA-125 response demonstrated a median overall survival of 808 days, versus 351 days for those patients without CA-125 response. The DSMC recommendation that the OVAL trial proceed is not assurance that the trial will meet its primary endpoint. The primary endpoint of the OVAL Phase 3 study is overall survival, which currently approved therapies for platinum-resistant ovarian cancer have thus far failed to demonstrate.

OVAL is an international Phase 3 randomized pivotal potential registration clinical trial that compares a combination of VB-111 and paclitaxel to placebo plus paclitaxel, in patients with platinum-resistant ovarian cancer. The study is planned to enroll approximately 400 patients. OVAL is conducted in collaboration with the GOG Foundation, an independent international non-profit organization with the purpose of promoting excellence in the quality and integrity of clinical and basic scientific research in the field of gynecologic malignancies.

Modi'in's Vascular Biogenics, operating as <u>VBL Therapeutics</u>, is a clinical stage biopharmaceutical company focused on the discovery, development and commercialization of first-in-class treatments for areas of unmet need in cancer and immune/inflammatory indications. (VBL 26.03)

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8.10. Nanox Agrees With CureMetrix for Al-based Assistive Diagnostic Tool

Nano-X Imaging (Nanox) announced its collaboration with California's CureMetrix, a global healthcare technology company that develops Al-driven software for radiology, to integrate the CureMetrix advanced Al diagnostics solution into Nanox's planned cloud-based software platform, the Nanox.CLOUD. Nanox is working to expand the range of medical imaging services it intends to provide to improve the accessibility and affordability of early-detection services. The Nanox.CLOUD is designed to provide an end-to-end medical imaging service, including services such as image repository, radiologist matching, online and offline diagnostics review and annotation, connectivity to diagnostic assistive Al systems, billing and reporting.

CureMetrix aims to leverage its proprietary algorithm to help reduce unnecessary biopsies. In a recent study of biopsy benign cases, CureMetrix's cmAssist™ software was able to correctly classify 70% of the biopsies as benign. As a result, CureMetrix's AI CAD could potentially reduce unnecessary biopsies and therefore improve cost efficiencies. In addition, studies have shown that false-positive findings on screening

mammography could cause long-term psychosocial harm to patients. As a result, CureMetrix's Al CAD could also help alleviate patient anxiety about breast cancer screening.

Neve Ilan's Nanox, founded by the serial entrepreneur Ran Poliakine, is an Israeli corporation that is developing a commercial-grade digital X-ray source designed to be used in real-world medical imaging applications. Nanox believes that its novel technology could significantly reduce the costs of medical imaging systems and plans to seek collaborations with world-leading healthcare organizations and companies to provide affordable, early detection imaging service for all. (Nanox 24.03)

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8.11. Can-Fite's Piclidenoson Submitted for Compassionate Use Treatment for Coronavirus

Can-Fite BioPharma has submitted Piclidenoson for a compassionate use program to treat coronavirus patients to the Institutional Review Board at Rabin Medical Center. If approved, patients would be treated at Rabin's Golda HaSharon Campus which is currently positioned to treat coronavirus patients in a specialized setting. The rationale to treat coronavirus with Piclidenoson is based on the drug's anti-rheumatic effect, proven in earlier Phase II clinical studies conducted under an open IND with the U.S. FDA. A Phase III trial in agreement with the European Medicines Agency (EMA) and FDA for the treatment of rheumatoid arthritis is ongoing. Rheumatoid arthritis drugs are currently being evaluated as a treatment for the uncontrolled immune response and cytokine release syndrome (CSR) created by coronavirus. A scientific article published in Drug Design, Development and Therapy presented data on how Piclidenoson, by binding with the A3 adenosine receptor (A3AR), may inhibit CSR. China recently approved Roche's Actemra, a rheumatoid arthritis drug, to treat coronavirus patients with lung damage, and Roche has commenced a global Phase III study for Actemra to treat coronavirus patients with severe pneumonia.

Piclidenoson has an excellent safety profile in over 1,400 patients treated for rheumatoid arthritis and other indications, with its most recent Drug Safety Update Report filed with regulatory agencies in February 2020 reporting the drug is well tolerated and has no emerging safety concerns. Can-Fite has experience with compassionate use programs, as its drug candidate Namodenoson is currently treating advanced liver cancer patients through compassionate use, also at the Rabin Medical Center in Israel.

Petah Tikva's <u>Can-Fite BioPharma</u> is an advanced clinical stage drug development Company with a platform technology that is designed to address multi-billion dollar markets in the treatment of cancer, inflammatory disease and sexual dysfunction. The Company's lead drug candidate, Piclidenoson, is currently in Phase III trials for rheumatoid arthritis and psoriasis. (Can-Fite 23.03)

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8.12. NovaSight Answers Need For Ophthalmology Telehealth Solutions During Pandemic

Airport City's <u>NovaSight</u>, an Israeli startup company developing eye-tracking based telehealth solutions for vision care, has launched two products focusing on children's vision. The Eyeswift® vision assessment system provides 11 different vision exams, including visual acuity, eye misalignment, stereoacuity, contrast sensitivity and reading analysis. It is a portable and easy-to-use device that can be operated by any staff member in remote clinics, optical shops, community centers, etc. and does not require an on-site eye care professional. The EyeSwift® digital system monitors the patient's eye movements and provides accurate and objective assessments of numerous vision impairments within seconds. The device is CE-marked and FDA-registered.

NovaSight's CureSight is an eye-tracking based system for lazy eye treatment, intended to replace traditional eye patching therapy. The treatment is carried out using sophisticated real-time 3D image processing algorithms, all while the children watch their favorite programs, social media, and videos in the comfort of their own home. At the same time, the system monitors the progress of the treatment automatically, providing feedback to caregivers through a telemedicine cloud-based application, and automatically adjusts the treatment protocol using AI and big data analysis. (NovaSight 30.03)

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8.13. Nano Retina Preliminary Results for Its NR600 Artificial Retina Device

Nano Retina, developer of the NR600, an artificial retina device that mimics the natural physiological processes of the human eye and restores functional vision to persons blinded by retinal degenerative diseases, including age-related macular degeneration and retinitis pigmentosa, reported preliminary results for First-in-Human implantations of its artificial retina device in March 2020.

As part of a European multicenter clinical trial enrolling up to 20 patients for the purpose of obtaining CE approval of the NR600, the first two patients, blinded by retinitis pigmentosa, have undergone the minimally invasive procedure to implant the device. The procedures were both performed in the Department of Ophthalmology of the University Hospital Leuven, Belgium.

Herzliya's Nano-Retina was founded in 2009 by Rainbow Medical. The company has developed the NR600, a miniature artificial retina, designed to restore vision to people blinded by retinal degeneration. The advanced device is implanted in a minimally invasive technique under local anesthesia and is expected to provide superior visual resolution due to its large array of proprietary nano-scale electrodes. Rainbow Medical is a private operational investment company that invents and grows startup companies, developing breakthrough medical devices for diverse unmet medical needs. (Nano Retina 30.03)

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8.14. OrthoSpin Raises Up to \$5 Million in Series B Financing

OrthoSpin announced that it raised \$5 million in a series B financing for its robotic, digitally enabled external fixation system for orthopedic treatments. Johnson & Johnson Innovation – JJDC led the investment round together with Trendlines. The Company has completed initial clinical cases in the U.S. and Israel with the FDA-cleared OrthoSpin Generation 1 system, which makes pre-programmed adjustments automatically without the need for patient involvement. Integrated software enables physicians to chart patient progress, and, when required, immediately adjust treatment programs. The OrthoSpin system potentially reduces or eliminates the need for in-person weekly follow-up and generally is expected to improve patient experience.

Misgav's OrthoSpin was founded in December 2014 to offer a new robotic, digitally enabled external fixation system for orthopedic treatments. OrthoSpin's innovative system has the potential to change the outcomes of various orthopedic treatments, such as bone lengthening, setting complex fractures, and correcting deformities. Trendlines is an innovation commercialization company that invents, discovers, invests in, and incubates innovation-based medical and agricultural technologies to fulfil its mission to improve the human condition. As intensely hands-on investors, Trendlines is involved in all aspects of its portfolio companies from technology development to business building. (OrthoSpin 31.03)

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8.15. FDA Clears Nuvo Group for its Innovative INVU Remote Pregnancy Monitoring System

Nuvo Group has received clearance from the U.S. FDA to market INVU, a prescription-initiated, protocoldriven remote monitoring platform that offers measurements of fetal and maternal heart rate via a wireless, self-administered INVU sensor band. Now, healthcare providers can offer a novel site for distributed pregnancy care—the mother's location—to remotely obtain documentation of medical-grade fetal heart rate (FHR) and maternal heart rate (MHR).

The INVU platform will be available by prescription from a healthcare provider who will initiate and schedule remote monitoring sessions. INVU non-invasively measures and displays FHR and MHR tracings via a self-administered, wearable sensor band worn by the mother which passively collects multiple sources of physiological signals. During the reading, the mother can access personalized insights via a smartphone

app, while her provider receives detailed data on maternal and fetal heart rate over time. INVU is indicated for use by pregnant women who need documentation of fetal heart rate activity, and who are in their 32nd week of gestation (or later), with a singleton pregnancy.

Tel Aviv's <u>Nuvo Group</u> is committed to serving providers and expectant mothers by advancing pregnancy care with new technology, tools, and practices. The INVU platform combines proprietary hardware, for high fidelity data collection, with innovative software solutions powered by AI tools to optimize the pregnancy care experience on a global scale. (INVU 30.03)

9. ISRAEL PRODUCT & TECHNOLOGY NEWS

9.1. Run:Al Announces Availability of Its K8s-based Deep Learning Virtualization Platform

Run:Al announced the general availability of its deep learning virtualization platform. Now supporting Kubernetes-based infrastructures, Run:Al's solution enables IT departments to set up and manage the critical Al infrastructure that data science teams need, providing control and visibility while maximizing hardware utilization and development velocity.

Instead of statically assigning GPUs to data scientists, Run:Al creates a pool of GPU resources, and will automatically and elastically "stretch" a workload to run over multiple GPUs if they're available. Important jobs can be given guaranteed quotas which they can also exceed, and Run:Al's software will elastically and automatically scale the workloads to the available hardware based on defined priorities. To simplify workflows, Run:Al's virtualization platform plugs into Kubernetes with a single line of code. The platform's powerful visibility tools enable companies to understand how their GPU resources are being used by their data science teams, helping with infrastructure scaling and identifying bottlenecks.

Tel Aviv's Run:Al has built the world's first virtualization layer for Al workloads. By abstracting workloads from underlying infrastructure, Run:Al creates a shared pool of resources that can be dynamically provisioned, enabling full utilization of expensive GPU compute. IT teams retain control and gain real-time visibility – including seeing and provisioning run-time, queueing and GPU utilization – from a single webbased UI. This virtual pool of resources enables IT leaders to view and allocate compute resources across multiple sites - whether on premises or in the cloud. The Run:Al platform is built on top of Kubernetes, enabling simple integration with existing IT and data science workflows. (Run:Ai Labs 17.03)

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9.2. VisIC Introduces 100kW Motor Inverter Design for 800V Power-bus Based on D3GaN

VisIC Technologies announced a breakthrough using GaN for 800V power-bus motor inverter that can be used for a cost effective EV Motor Drive. University of Texas at Austin and VisIC Technologies cooperated on the 100kW inverter reference design that can be used as a base for Inverter designs for EV, Industrial, PV and other applications.

Based on VisIC's unique D3GaN technology, this 100kW inverter reference design can be adapted to work both under 800V and 900V power-bus. The VisIC GaN devices have highly thermal efficient SMD packaging, high threshold voltage, fast switching and easy paralleling for most cost effective, highly efficient, and reliable inverter solution for EV. The estimated peak efficiency can reach 99.3% with 40kHz switching frequency, due to the low switching losses of D3GaN devices. The total dimension is 26.9x21.4x3.5cm3 with liquid cooling heatsink. The power density is 50kW/Liter including the liquid cooling. The total weight is about 2.5kg.

Ness Ziona's <u>VisIC Technologies</u> was established by experts in Gallium Nitride (GaN) technology to develop and market advanced GaN-based power conversion products. VisIC has successfully developed, and is bringing to market, high power GaN-based transistors and modules. GaN is expected to replace most of the Silicon-based (Si) products currently used in power conversion systems. Its high efficiency and

reliable products designed for high power conversion for hybrid and electric vehicles, Datacenters, renewable energy and industrial motors. (VisIC Technologies 17.03)

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9.3. Safe-T's Remote Access Solution Helps Businesses Impacted by the Coronavirus

Safe-T Group announced that several organizations have successfully deployed its Secure Application Access (SAA) solution to allow work-from-home policies for their employees. This announcement follows the Company's previous announcement regarding offering a three-month free-of-charge remote access service for selected organizations around the globe. Among the organizations that have deployed the solution are one of Israel's leading universities, a world leading fintech company, and a U.S. insurance company. All of the aforementioned organizations were required to send employees to work remotely and were facing the need to provide their employees with access to corporate resources and desktops.

By deploying Safe-T's SAA solution, employees can easily and securely connect from their mobile phones, laptops or home computers to corporate resources, without installing any software on their devices and while ensuring the organization's network is not exposed to external threats. Safe-T also announced the expansion of its offering with the addition of four new resellers in North America, enabling more organizations to effectively and efficiently implement secure remote access for their workforce and business requirements.

Herzliya Pituah's <u>Safe-T Group</u> is a provider of access solutions which mitigate attacks on enterprises' business-critical services and sensitive data, while ensuring uninterrupted business continuity. Safe-T's cloud and on-premises solutions ensure that an organization's access use cases, whether into the organization or from the organization out to the internet, are secured according to the "validate first, access later" philosophy of zero trust. This means that no one is trusted by default from inside or outside the network, and verification is required from everyone trying to gain access to resources on the network or in the cloud. (Safe-T Group 18.03)

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9.4. Superwise.ai Launches Al Healthcheck to Assure Performance of Al Models

Superwise.ai has launched a new service, AI Healthcheck, which allows businesses to quickly get an indication of how their AI models are performing and discover if any inaccuracies are being introduced by outside factors. Using the company's SaaS-based AI Assurance platform, the new offering gives business leaders an option to validate the effectiveness of their AI systems during uncertain and changing business conditions that may be gradual or caused by sudden and uncontrollable disruptions to global markets, including recessions, pandemics, elections and extreme weather events. Seed funding announced earlier in the month has allowed the company to bring AI Healthcheck to market and make it available to businesses globally, offering business leaders an opportunity to quickly assure their AI models' performance and assess potential risks.

Al Healthcheck allows businesses using Al in operational process to go through an immediate assurance process that determines if business and technical conditions reflected in the data feeding the Al models is still a fit for optimal business results. A business can simply stream the model baseline data and current sets used in production into the Al Healthcheck system, with no integration required into internal systems. Al Healthcheck differs from the company's standard offering because it can be used as a one-off check versus an ongoing monitoring tool that identifies and fixes issues in real-time. For a limited time, the Al Healthcheck service is being offered free of charge for a business's first Al model and then charged after that for the total number of models validated.

Tel Aviv's <u>Superwise.ai</u> enables business and operational teams to take ownership of the health of their Al environments. The company's Al Assurance platform monitors Al models and can detect and solve issues in real-time, rather than taking the reactionary approach triggered by dropped business KPIs, which only

occur after an error has become an issue. It bolsters trust for business leaders and operational teams who no longer need to rely on data science teams to ensure that AI models are functioning properly. The superwise ai platform includes AI performance management, bias detection, explainability and AI analytics capabilities. (Superwise ai 18.03)

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9.5. Sixgill Introduces Darkfeed- Real-Time Dark Web Indicators of Compromise

Sixgill now makes it possible to integrate its actionable intelligence into any security platform with its new product - Darkfeed. Darkfeed is a blacklist of malicious indicators of compromise, including domains, file hashes, and IP addresses, extracted from Sixgill's real-time collection of deep, dark and surface web intelligence. Structured in STIX format, Darkfeed seamlessly integrates into SIEM, SOAR, or any other security platform, resulting in the ability to better anticipate attacks and proactively protect their organizations. Security teams can automatically integrate Darkfeed into their existing security infrastructure. This machine-to-machine setup requires no human involvement to block the threats.

Furthermore, Darkfeed provides early warning of new and otherwise undetected malware threats, allowing security teams to bolster their organization's defenses, hunt for threats inside their networks, and enabling them to better-understand emerging malware trends, tactics, techniques, and procedures.

Netanya's <u>Sixgill</u> is a fully automated cyber threat intelligence solution suite that helps organizations protect their critical assets, reduce fraud and data breaches, protect their brand and ultimately minimize attack surface. The platform empowers security teams with contextual and actionable insights as well as the ability to conduct real-time investigations. Rich data feeds such as Darkfeed harness Sixgill's unmatched intelligence collection capabilities and delivers real-time intel into organizations' existing security systems to help proactively block threats. (Sixgill 17.03)

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9.6. Rittal Announces Its First HPC Direct Chip Cooling Solution with ZutaCore

On the heels of their strategic partnership, Germany's Rittal, a leading global systems provider of IT infrastructure as well as industrial solutions, and ZutaCore announced the first Rittal HPC Cooled-by-ZutaCore solutions. First, is a rear-door-air (RDA) solution, part of Rittal's LCP system portfolio. It is compact, therefore saves valuable rack space as all of the liquid cooling components are incorporated directly into the rear door. It can be easily deployed into existing data centers without modifying existing infrastructure. Second, is the In-Rack Edge solution, available in both air-cooled and water-cooled versions. The air-cooled In-Rack Edge solutions can be installed into any rack in almost any environment, enabling the exponential demand for high-powered processing at the edge or in the data center. The water-cooled version enables extremely energy efficient cooling of up to 70 kW of processors in a single rack. This unit is designed to handle fast growing processor and server power.

Now customers can use trusted IT racks from Rittal combined with the innovative direct-on-chip evaporative cooling solution from ZutaCore to meet and surpass the challenges posed by server-level hot spots and edge computing requirements, while mitigating the risk of IT failure. Furthermore, two-phase liquid cooling is prepared for any evolution in high-powered chips, as there is no limit to what it can cool as processors progress upwards of 900W.

ZutaCore is a waterless, two-phase change, liquid cooling technology company, unlocking the power of cooling and revolutionizing data centers. The HyperCool technology platform alleviates cooling boundaries at the chip, server, rack, POD and data center levels. The HyperCool solution is a complete hardware system, enhanced by a software-defined-cooling platform, yields unparalleled heat dissipation at the chip level, triples computing densities on a fraction of the footprint and halves costs. Designed by a veteran team in Israel and enabled by 14 patent-pending innovations, HyperCool is a near plug-and-play system

that delivers consistent results, in any climate. ZutaCore's R&D center is in Israel with HQ office in California. (Rittal 19.03)

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9.7. Sapiens & HazardHub Integrate Real-time Risk Data Into a P&C Core Suite

Sapiens International Corporation has entered into an agreement to partner with San Diego's HazardHub, a third-generation provider of property-level hazard risk databases. The company's scientists convert massive amounts of geospatial digital data into easy-to-understand and actionable risk assessments. HazardHub's real-time, comprehensive sets of risk data will be integrated into the Sapiens CoreSuite for Property & Casualty – which is comprised of three fully integrated, yet standalone components: policy, billing and claims – to improve carriers' underwriting efforts.

Sapiens CoreSuite helps North American carriers meet and exceed today's requirements, while preparing them for the future. Purpose-built for the P&C market, carriers can choose to harness Sapiens' end-to-end, cloud-based P&C insurance software with digital capabilities, or select from our individual modular components to meet today's needs.

Holon's <u>Sapiens International Corporation</u> empowers insurers to succeed in an evolving industry. The company offers digital software platforms, solutions and services for the property and casualty, life, pension and annuity, reinsurance, financial and compliance, workers' compensation and financial markets. With more than 35 years of experience delivering to over 500 organizations globally, Sapiens has a proven ability to satisfy customers' core, data and digital requirements. (Sapiens 19.03)

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9.8. IDE's VIM All Weather Snow Maker is a Sustainable Solution for Snowmaking

IDE Technologies continues to leverage its vast engineering know-how to provide sustainable solutions based on the proprietary Vacuum Ice Maker (VIM) technology for All Weather Snowmaking & Refrigeration applications. VIM All Weather Snow Maker allows businesses to meet their growing need for guaranteed snow, with a unique technology that achieves "spring snow" quality, high snow capacity and most efficient power consumption at any weather condition and environmentally friendly way. VIM All Weather Snow Maker technology is ideal for any situation - critical links, receding glaciers, finishing zones, adventure and sport events, and offers a diverse choice of energy efficient, highly reliable and low maintenance applications.

Inside the VIM All Weather Snow Maker freezer, water is exposed to a deep vacuum. The vacuum forces a small portion of the water to evaporate, while the remaining water freezes and forms a water-ice mixture called slurry. This ice slurry is pumped out from the freezer and into an ice concentrator that separates water from ice crystals. In order to maintain deep vacuum inside the freezer, water vapor is continuously evacuated from the freezer, compressed and fed into a condenser using IDE's centrifugal compressor. Condensing the vapor requires cooling water supplied by a standard water chiller.

A world leader in providing advanced water treatment solutions, Kadima's <u>IDE</u> specializes in the development, engineering, construction and operation of some of the world's largest and most advanced thermal and membrane desalination facilities and industrial water treatment plants. IDE partners with a wide range of customers - municipalities, mining, refineries and power plants - on all aspects of water projects and delivers approximately 3 million m3/day of high-quality water worldwide. (IDE Technologies 18.03)

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9.9. Minerva Labs Protects Every Home Computer That Connects to the Organization

Minerva Labs offers a unique solution for home-office workers. The remote connection security solution (Minerva Remote User Protection) intended for working remotely on the corporate network using BYOD. Given the spread of the coronavirus and the World Health Organization's definition of a global epidemic, many businesses are moving those days to remote work.

Minerva Labs' unique solution for protecting home-office users' endpoints, integrates with any VPN provider. The solution provides full endpoint protection against known and unknown threats such as file-less attacks, PowerShell scripts, ransomware, malicious documents (macro), and other evasive malware. It also provides browser isolation and full integration with built-in Microsoft Windows Defender. Minerva's agent-less solution integrates with the VPN as part of its security policy with a few simple steps and kicks-in seamlessly once the home user executes the VPN application and runs through the remote session, without the need to manage the home computers by the organization.

Petah Tikva's Minerva Labs joins the world's efforts against coronavirus (COVID-19) to help businesses worldwide to maintain their ongoing operations securely. Therefore Minerva offers the Remote User Protection solution described above for 30 days free of charge. Minerva Labs is a market leader in Endpoint Security solutions. The security platform helps prevent known and unknown advanced threats and ransomware attacks. (Minerva Labs 19.03)

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9.10. Tower Releases Novel Kits Reducing Power Consumption of Power Management ICs

Tower Semiconductor announced the release of design kits for a novel 0.18um high-performance power management technology which offers over 35% power efficiency improvement and/or equivalent amount of die-area directly contributing to the die's price competitiveness. This new offering enables scalable IC operation of up to 24 volts making it ideal for the world's growing consumer, industrial, automotive, and computing markets. This complements the Company's previously announced low-voltage, 65nm Power BCD process, as well as its high-voltage 140V Resurf bulk and 200V SOI technologies, providing customers with best-in-class performance across the entire range of 1.2V to 200V from a single foundry with the same design tools and design experience. The technology builds on six generations of the Company's very successful existing high-performance 0.18um power management platforms and is largely backward compatible making it easy to port existing parts and designs to the more efficient novel process.

Migdal HaEmek's <u>Tower Semiconductor</u> provides technology and manufacturing platforms for integrated circuits (ICs) in growing markets such as consumer, industrial, automotive, mobile, infrastructure, medical and aerospace and defense. Tower Semiconductor's focuses on creating positive and sustainable impact on the world through long term partnerships and its advanced and innovative analog technology offering, comprised of a broad range of customizable process platforms such as SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, non-imaging sensors, integrated power management (BCD and 700V), and MEMS. (Tower Semiconductor 23.03)

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9.11. Kornit Digital Introduces NeoPigment Robusto Softener Solution for Fashion

Kornit Digital announced the release of its new NeoPigment™ Robusto Softener solution for Presto, the company's system for digital, pigment-based direct-to-fabric decoration. Reflecting Kornit's commitment to expanding sustainable, on-demand (i.e. waste-free) decoration capabilities to all corners of the textile industry, this solution eliminates a key barrier between digital, pigment-based impressions and the fashion industry—namely, a softer handfeel. The new Softener solution is a product of the brand's continuous innovation strategy, making Kornit technology the fashion world's solution for on-demand proximity production. By streamlining the end-to-end process, these systems eliminate the need to predict demand and manage inventory, while supporting global sustainability imperatives. Offering vibrant colors, intricate design capabilities, and a fabric touch that is second to none, Kornit's pigment-based digital print solutions require minimal space and labor relative to competitive offerings.

Rosh HaAyin's Kornit Digital develops, manufactures and markets industrial digital printing technologies for the garment, apparel and textile industries. Kornit delivers complete solutions, including digital printing systems, inks, consumables, software and after-sales support. Leading the digital direct-to-garment printing market with its exclusive eco-friendly NeoPigment printing process, Kornit caters directly to the changing needs of the textile printing value chain. Kornit's technology enables innovative business models based on web-to-print, on-demand and mass customization concepts. (Kornit Digital 23.03)

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9.12. Panorays Partners Deliver Comprehensive Visibility into SaaS and Cloud Providers

Panorays announced that they are partnering with the Cloud Security Alliance (CSA) to be a licensed distributor of the CSA's Consensus Assessment Initiative Questionnaire (CAIQ). The Panorays partnership with the Cloud Security Alliance enables companies to quickly and easily ascertain if their cloud provider complies with standard security regulations. Panorays' customers further gain through a context-based CAIQ, customized to the relationship of Panorays and the provider so that only regulations or frameworks relevant to the relationship are asked. Onboarding third parties through CAIQ is done automatically so customers can send, track and evaluate their cloud providers. The CAIQ assessments provide a set of questions for a cloud provider to ascertain its compliance with the Cloud Controls Matrix (CCM). The CCM is a baseline set of security controls that is based on accepted security standards, regulations and controls framework, such as ISO 27001/27002, ISACA COBIT, PCI, NIST, Jericho Forum and NERC CIP.

Tel Aviv's <u>Panorays</u> automates third-party security lifecycle management. With Panorays' automated platform, companies dramatically speed up third-party security evaluations, eliminate the manual questionnaire process, gain continuous visibility and ensure compliance to regulations such as GDPR, CCPA and NYDFS. It is the only platform that enables companies to easily view, manage and engage on the security posture of their third parties, vendors, suppliers and business partners. Panorays is a SaaS-based platform, with no installation needed. (Panorays 24.03)

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9.13. Atera Announces New System to Rapidly Deploy a Remote Workforce

Atera, developer of the Data Science-based IT automation platform that combines Remote Monitoring and Management (RMM), Professional Services Automation (PSA), and remote access into one powerful solution, announced that it has created a new, easy system to deploy a remote workforce amidst the COVID-19 pandemic. Through an integration with Splashtop's software into Atera's platform, Managed Service Providers (MSPs) and IT professionals can now rapidly set up remote workforces for their clients from anywhere, enabling secure remote access for employees working from home.

The technology enables employees working remotely to connect to their work computer, secure highperformance remote device access, simple set-up via the Atera platform, easy deployment to end user with a shareable link and low monthly cost with the option to cancel anytime

Tel Aviv's <u>Atera</u> is the developer of a Data Science-based IT automation platform that combines RMM, PSA, and remote access into one powerful solution. Atera's all-in-one innovative platform offers MSPs improved operational efficiency, seamless integration, end-to-end management, and disruptive pricing. (Atera 25.03)

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9.14. RADWIN Partners With Mobax for Wireless Broadband Solutions Across South Africa

RADWIN has signed a partnership agreement with Mobax, a leading telecommunications and technology company in South Africa. Mobax will offer RADWIN's comprehensive portfolio of Point-to-Multipoint and

Point-to-Point fixed wireless broadband solutions to its extensive base of telecommunication network operators and corporate clients. This partnership leverages upon RADWIN's wireless broadband technology and the professionalism and high-quality engineering capabilities of Mobax to deliver advanced fixed wireless solutions to existing network operators and corporate clients as well as new potential customers.

Tel Aviv's <u>RADWIN</u> is the global provider of broadband wireless solutions that deliver blazing fast broadband with unparalleled reliability. Incorporating cutting-edge technologies, RADWIN's solutions are equipped with powerful OSS tools that support all operational aspects of the network lifecycle and enable operation in the toughest conditions including interference and nLOS. Deployed in over 170 countries, RADWIN's solutions power applications including backhaul, access, private network connectivity and broadband on the move for rail and metro trains. (RADWIN 26.03)

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9.15. Illusive Networks Integrates with BlueCat to Speed Deception Deployment

Illusive Networks announced an out-of-box integration with Toronto's BlueCat Adaptive DNS. This integration helps speed deployment of dynamically authentic deceptive Active Directory (AD) artifacts for detection of in-network attacks.

Authenticity of deceptions requires a mix of real network data and the ability to automatically refresh environments on a continuous basis. Both steps keep the false environment dynamic and credible. Illusive Networks' integration with BlueCat Adaptive DNS automates the IP address provisioning process vital to the creation of these environments. It replaces manual processes with the speed and efficiency of deceptive Active Directory assets deployed through automation. For organizations deploying in stealth, BlueCat's automatic provisioning of IP addresses obscures their intended assignment for deceptive use and regulates the pool the addresses come from, thus limiting scope of knowledge for the resource to essential personnel only.

Tel Aviv's <u>Illusive Networks</u> uses next-generation deception technology to stop cyber-attacks by paralyzing attackers, destroying their ability to make decisions, and depriving them of the means to move sideways towards attack targets. Illusive's inescapable deception and attack surface reduction capabilities eliminate high-risk pathways to critical systems, force attackers to reveal themselves early in the threat lifecycle, and capture real-time forensics that accelerate incident response. Built on agentless, advanced automation, and requiring very little security team support, Illusive immediately shifts the advantage to defenders, freeing precious resources from the complicated and data-heavy approaches that overloaded them in the past. (Illusive Networks 24.03)

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9.16. BringgNow Solution Lets Businesses Immediately Launch Delivery Services

Bringg announced the pre-release of BringgNow, a last-mile delivery solution to immediately launch and scale delivery operations. Using BringgNow business owners can quickly load incoming orders, dispatch deliveries to their own drivers or crowdsourced fleets and deliver items to customers with a fully branded, real-time Uber-like experience. While this solution was scheduled to be released later this year, Bringg made the decision to release early to aid businesses facing increased demand for delivery services, especially grocers, convenience stores and restaurants, as consumers look to reduce the spread of COVID-19. Bringg is offering business owners this out of the box solution for last-mile delivery management for free.

As a leading delivery orchestration solution for some of the world's best-known brands in more than 50 countries, Bringg has seen firsthand the evolution in how goods have been delivered over the past several years. In just a few weeks, efforts to reduce the spread of COVID-19 have forced businesses across sectors and industries to engage digital services on a previously unseen scale and accelerated timeline.

However, only a few large chains and delivery services currently have the technology and infrastructure to manage and scale their delivery services this rapidly, providing exceptional delivery experiences with offerings such as contactless delivery. BringgNow will provide smaller businesses the ability to start, scale, and manage delivery operations to ensure a delivery experience comparable to that of leading food and retail businesses.

Tel Aviv's <u>Bringg</u> is the leading delivery orchestration solution, providing enterprises with the most efficient way to manage their complex delivery operations. Some of the world's best-known brands in more than 50 countries are already gaining clear strategic value from Bringg's powerful SaaS platform which offers the real-time capabilities they need in order to achieve logistical excellence across their delivery ecosystem. (Bringg 25.03)

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9.17. AudioCodes Launches Work-at-Home Solutions to Support Business Continuity

AudioCodes announced a range of solutions to support the growing trend for work-at-home employees and contact center agents and ensure business continuity in times of pandemic and other health issues requiring social distancing or office shutdown. Based on AudioCodes field-proven, high quality software and hardware voice products, these solutions deliver reliable and secure voice communications for work-at-home employees using a variety of unified communications and contact center platforms. The work-at-home solutions provided by AudioCodes focus on Microsoft Teams users, remote contact center agents and secure, VPN-less voice connectivity.

Microsoft Teams is the ultimate tool for enterprise collaboration and productivity and is ideally suited to effective home-working when combined with enterprise quality voice from AudioCodes, the experts in voice-enabling Microsoft Teams. AudioCodes Mediant SBCs are certified for Direct Routing to ensure seamless inbound and outbound calling for Teams users. In addition, with AudioCodes IP phones remote workers can enjoy the full Teams experience including high quality voice calls, Active Directory integration and presence monitoring.

For work-at-home contact center agents AudioCodes has an easy to deploy and operate solution that leverages WebRTC and the Opus codec for native browser-based toll quality audio over the unmanaged internet, even at peak load times. The solution integrates with existing contact center solutions and includes an SBC with integrated WebRTC gateway for remote worker connectivity. Opus transcoding combined with end-to-end security and voice quality monitoring are used to ensure quality and performance goals are met. Agents can take advantage of AudioCodes' WebRTC based softphone or SIP IP phones for clear and reliable voice calls.

Lod's <u>AudioCodes</u> is a leading vendor of advanced voice networking and media processing solutions for the digital workplace. AudioCodes enables enterprises and service providers to build and operate all-IP voice networks for unified communications, contact centers, and hosted business services. AudioCodes offers a broad range of innovative products, solutions and services that are used by large multi-national enterprises and leading tier-1 operators around the world. (AudioCodes 30.03)

10. ISRAEL ECONOMIC STATISTICS

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10.1. S&P Sees Israel Avoiding Recession

Globes reported that S&P observed that Israel's strong economy and the shekel's depreciation would be factors that will help Israel overcome the virus crisis. The depreciation of the shekel against the dollar is a positive development that should help the Israeli economy overcome the coronavirus crisis, global ratings agency S&P believes, in an initial assessment of the situation. The global rating agency expects Israel to avoid a recession in 2020 and even record 2% growth, even though Israel's Ministry of Finance itself sees

a best case scenario of 0% growth in 2020. However, S&P says, "A full recession is not expected at this stage due to the robustness of the domestic economy and it will happen only in the event of an additional hit to the economy such as a geopolitical event or the collapse of real estate prices."

S&P said, "Although Israel is also suffering a substantial slowdown because of the coronavirus outbreak, the local currency is actually depreciating, which is a factor that could help in the future by strengthening exports and bringing back inflation." S&P also pointed out that Israel's original economic growth forecast was significantly higher than the euro bloc but that the Covid-19 outbreak will ultimately depend on the length and severity of the virus and the degree of success of the measures taken by the government and the Bank of Israel. However, S&P's economists see a worldwide recession with global GDP growth of just 1 - 1.5% in 2020. (Globes 19.03)

11. IN DEPTH

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11.1. LEBANON: Defaulted Lebanon Hopes to Pay Off Debts with Cannabis

Sarah Abdallah posted in <u>Al-Monitor</u> on 30 March that as soon as Lebanon's parliament returns from its closure over the novel coronavirus outbreak, a bill legalizing cannabis for medicinal and industrial purposes is expected to pass as lawmakers address the country's worst economic crisis in decades.

The Lebanese government is looking to cannabis cultivation for medicinal and industrial purposes to improve the country's economic situation. Lebanon is the third most indebted country in the world, with a debt-to-GDP ratio of 170%, according to Prime Minister Hassan Diab. The Finance Ministry announced on 23 March that Lebanon will suspend payments on all its \$30 billion worth of Eurobonds in foreign currency after defaulting on its \$1.2 billion debt on 9 March in the country's first-ever default.

Lebanon's deputy parliament speaker Elie Ferzli told Al-Monitor, "Parliamentary committees passed a draft law on 26 February legalizing cannabis cultivation for medical and industrial use." He explained, "The draft law will be transferred to the parliament's general committee for approval." The Lebanese Parliament closed due to the coronavirus outbreak, but, the law is expected to pass after it reconvenes.

Ferzli expressed optimism about the economic benefits of the cultivation and export of cannabis, saying, "The global consultancy firm McKinsey suggested, in a study about setting a vision for Lebanon's economy to grow its GDP and create jobs through selecting productive sectors, that legalizing the cultivation of cannabis would bring in up to \$1 billion per year in revenue for the government."

According to the General Directorate for Studies and Information, "The economic benefits of cannabis legislation lie in the use of many vast neglected lands, placing all farmers in [an equal] legal framework and combating the cannabis trade in the black markets." "Each dunum can yield up to \$10,000. Cannabis legislation also aims to reduce unemployment and achieve economic growth, as well as stimulate exports toward foreign countries, enabling the use of foreign currency, which enhances the central bank's reserve of foreign currencies," the paper added.

Ferzli pointed out, "The type of plant that Lebanon seeks to cultivate is ... specific to medical industries," stressing, "The Lebanese state does not accept the use of hashish as a resource to support the economy."

Hussein Hammoud, a professor at the Faculty of Agriculture Sciences in the Lebanese University, said in a research document published by the Lebanese army, "The number of workers in the agricultural sector in the Bekaa region [in eastern Lebanon] is about 60% of the population. So many families in the villages of Baalbek and the Bekaa inherit hashish cultivation across generations." Hammoud added, "Hashish cultivation in the 1980s generated for Baalbek and Hermel close to \$500 million annually."

In remarks to Al-Monitor, Minister of Agriculture Abbas Mortada explained that after the bill is passed, a team will study the appropriate places for cultivation of cannabis, such as the type of soil in different regions. He added that a "Cannabis cultivation body" will be established and controlled by the Presidency of the Council of Ministers. "This body will oversee planting, harvesting, manufacturing and establishing research centers and laboratories."

Mohammad Mroueh, a professor at the Medicinal Cannabis Research Center in the Lebanese American University, told Al-Monitor that cannabis has high medical value and that Lebanon's climate is ideal for its cultivation. He added, "The medical use of cannabis dates back to 700 years across the Arab region. I obtained three plants to do my research and study the benefits of extracts from the plant, including Tetrahydrocannabinol and not only cannabinoids."

The government has allowed Mroueh's research but has not yet formally approved the establishment of his research center, which opened in May 2018. Mroueh pointed out that cannabis seems to prevent the multiplication of cancer cells and localized tumors, but it is necessary for the patient to continue chemotherapy in parallel with consuming the therapeutic oil. He revealed that the Food and Drug Administration has approved cannabis products like Sativex, a mouth spray used for neuropathic pain and spasticity in multiple sclerosis) patients; Marinol, a treatment for chemotherapy-induced nausea in cancer patients; and Epidiolex, a treatment for severe and recurrent epilepsy.

Sarah Abdallah is a Ph.D. student in linguistics and communication, with degrees in law, political science and linguistic engineering. She is a translator and media consultant with the International Journalists' Network (IJNet) and was a senior editor with Lebanon24, contributor at Huffingtonpost Arabi and breakingnews translator at LIBANCALL. (Al-Monitor 30.03)

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11.2. JORDAN: IMF Executive Board Approves \$1.3 Billion Extended Arrangement

On 26 March, the Executive Board of the International Monetary Fund (IMF) approved a 48-month arrangement under the Extended Fund Facility (EFF) with Jordan for an amount equivalent to SDR 926.37 million (about \$ 1.3 billion or 270% of Jordan's quota) to support the country's economic and financial reform program. It also provides for spending to contain and treat COVID-19. This program is anchored by critical structural reforms designed to lower electricity costs for businesses and create incentives for them to hire more young people. The aim is to support stronger and more inclusive growth, create jobs, especially for women and young people, and reduce poverty. Improving the fiscal situation is also needed to stabilize and bring public debt towards more sustainable levels. Continued support from donors, particularly through concessional loans and budget grants, will be critical to program success and help Jordan cope with humanitarian and economic needs.

Although the program was designed before the COVID-19 outbreak, changes were made to the program to support unbudgeted spending covering emergency outlays and medical supplies and equipment. If the impact of the outbreak is deep enough to put at risk program objectives, the program will be adapted further to the changed circumstances, upon reaching understandings with the authorities.

Following the Board's decision, an amount equivalent to SDR 102.93 million (about \$139.23 million) is available for immediate disbursement; the remaining amount will be phased out over the duration of the Fund-supported program, subject to eight program reviews.

Following the Executive Board discussion on Jordan, Mr. Mitsuhiro Furusawa, Deputy Managing Director, and Acting Chair, said:

"The Jordanian economy has continued facing significant challenges. Macroeconomic stability and external buffers have been preserved, but fiscal vulnerabilities remain. Structural reforms and continued fiscal consolidation efforts are critical to lift growth, reduce unemployment and bring debt on a downward path.

"The COVID-19 outbreak poses significant risks to the program implementation. The authorities have implemented measures to help contain the impact of the pandemic, but adjustments to the program modalities might be necessary in light of the rapidly changing circumstances. Donor support through budget grants and concessional financing will be critical to help Jordan cope with the effects of the COVID-19 outbreak and the Syrian refugee crisis and to support program objectives.

"Continued fiscal consolidation efforts are needed to bring public debt toward more sustainable levels. The government's strategy should focus on broadening the tax base and reducing business tax exemptions through an overhaul of the investment incentives framework and revamping tax and customs administrations. These reforms will need to be complemented by efforts to contain spending, limit losses in the energy and water sectors, and improve the targeting of Jordan's social safety net.

"Monetary policy should continue focusing on supporting the peg and the economy. While the financial sector is generally sound, continued efforts are needed to promote its stability and financial inclusion.

"An ambitious structural agenda should be implemented to improve the business environment, enhance competitiveness and support growth. The authorities need to reduce high electricity costs faced by businesses; implement measures to create jobs, particularly for women and young people; and simplify procedures to attract foreign investment. Governance reforms will be necessary to strengthen public-sector transparency and accountability."

ANNEX - Recent Economic Developments

Jordan has made progress in reforming its economy, but pressing challenges remain. The impact of the ongoing COVID-19 outbreak, regional conflicts, and the hosting of Syrian refugees weigh on social conditions, public finances, investment, and the external accounts. Macroeconomic stability has been preserved, external imbalances have improved markedly, reserve buffers have remained adequate, and the financial system is sound. However, growth has remained weak (about 2%) and unemployment high (at 19% of the labor force), especially for youth and women. Fiscal consolidation also proved difficult to maintain and public debt remained elevated.

To tackle these challenges, the authorities' program is centered on critical reforms to remove the most important remaining impediments to growth, while continuing to bring down the budget deficit. These efforts build on the Jordan Economic Growth Plan 2018–22 and are anchored by the five-year reform matrix launched at the 2019 London Initiative. The authorities' program includes measures in the areas of reducing business costs and enhancing competitiveness, labor market reforms, governance, improved tax collection, and enhanced access to credit.

Program Summary

Building on the 2016 extended arrangement under the EFF, the new program aims at achieving stronger and more inclusive growth and create jobs, with implementation centered on growth-enhancing structural reforms and gradual reduction in the budget deficit. The needed adjustment is spread over a longer period to support the growth recovery. The exchange rate peg continues to serve as an appropriate nominal anchor, which has helped preserve stability in the face of repeated external shocks.

Structural policies to support growth and job creation. Structural reforms are centered on the most important remaining impediments to growth. Key efforts include: (i) reducing high electricity costs faced by businesses to enhance competitiveness and support job creation, while directing electricity subsidies only to those who need them most; (ii) a temporary reduction in social security contributions, among other labor market reforms, to promote greater employment opportunities, particularly for women and young people; and (iii) the swift implementation of the authorities' five-year matrix, launched in the 2019 London Initiative, to improve the business climate, boost competitiveness, and attract foreign investment. These efforts are supported by governance reforms to strengthen public-sector transparency and accountability.

Continued reduction in the budget deficit to bring public debt towards more sustainable levels. The program's fiscal strategy relies on broadening the tax base and reducing tax exemptions for businesses, particularly through an overhaul of the investment incentives framework and revamping of tax and customs administrations. These reforms will be complemented by efforts to rationalize current expenditures while protecting critical social, health and education spending; contain losses and contingent liabilities in the energy and water sectors; and improve the targeting of Jordan's social safety net.

Preserving monetary and financial stability. Monetary policy will remain focused at supporting the peg by maintaining an adequate reserve buffer, while also considering domestic economic conditions. The authorities plan to continue strengthening the legislative and regulatory framework for Jordan's banking and financial sectors, including further enhancing the Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) regime.

Continued support from donors, particularly in concessional financing and budget grants. This will be critical to program success and help Jordan cope with needs arising from the COVID-19 outbreak and the Syrian refugee crisis. (IMF 26.03)

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11.3. JORDAN: Under Nationwide Curfew, Jordanians Ponder Economic Cost of Coronavirus

Osama Al Sharif posted in <u>Al-Monitor</u> on 23 March that Jordan has taken some measures to contain the economic repercussions of the coronavirus, but some analysts believe they are not enough to avoid total collapse.

The Jordanian government imposed an open-ended nationwide curfew on 20 March, two days after it called on citizens to stay home and avoid leaving unless necessary. Prime Minister Razzaz, in his capacity as defense minister and under an emergency law, ordered the curfew as the number of those infected with coronavirus increased and as citizens ignored the call for self-isolation.

At 7 a.m. on 20 March, sirens were heard all over the country, announcing the beginning of the curfew, which affected roughly 10 million people. Hours before, army, police and civil defense personnel were deployed throughout the kingdom to enforce the curfew. Those violating it — and more than 400 people did on day one — face immediate jail time, without trial, of no more than a year, and a fine.

Jordan was among the first countries in the region to adopt an immediate response plan to contain the spread of the virus. In addition to sealing off its borders and suspending all flights, giving all public sector employees two weeks of leave and suspending schools and universities, the central bank took a number of steps, including dropping the main policy rate by 100 basis points to 2.5% and reducing the cash reserve requirement that banks must maintain to release an additional liquidity of around JOD 550 million (\$775 million). The central bank also called on banks to reschedule loans and offer appropriate grace periods with no additional charge to their clients.

Once Razzaz announced the activation of the Defense Law on 17 March, issuing Defense Order No. 1, suspending some articles of the 2014 Social Security Law. Under that order, the Social Security Corporation reduced the social security subscription ratio for institutions and employees from 21.75% to 5.25%. The move aims to alleviate the financial burden on both employer and employees.

On 22 March the government announced an aid package of JOD 16 million (\$22 million) to poor families, the elderly and ill in the form of food and medicine. The government is also studying options to help farmers and other sectors.

Since no one can predict how long the lockdown will last, it is difficult to speculate on how much the economy will suffer. In January, the International Monetary Fund (IMF) predicted that the kingdom's gross

domestic product will grow by 2.2% in 2020. Following the lockdown and amid the global coronavirus outbreak, that figure is no longer realistic.

Economic analyst and columnist Salameh al-Darawi told Al-Monitor that the repercussions of the coronavirus outbreak are the most serious threat to Jordan's economy since the establishment of the kingdom. "Every sector will be affected and the longer the crisis goes on the deeper the damage," he said. "Just imagine this: The treasury needs 580 million Jordanian dinars (\$818 million) every month to pay civil servants, military and civil retirees. More will be needed for private sector employees. Where will the money come from if all sectors are shut down?"

Darawi pointed to another challenge facing the government. "We pay foreign lenders about 1.25 billion Jordanian dinars (\$1.75 billion) annually, and local debts through government bonds are worth another 5 billion Jordanian dinars (\$7 billion). How can we meet our obligations if the factories and the borders are closed?" he said.

The tourism sector, which contributes about 19% of Jordan's GDP, is feeling the immediate effects of the lockdown. Business analyst Jawad Abbasi told Al-Monitor that tourism expenditures rose by 10% last year to reach JOD 4 billion (\$5.6 billion), mostly in foreign currency. "With the coronavirus outbreak," he said, "it is certain now that the tourism sector has lost the spring and most of the summer seasons, if not the rest of the year." He added that this means the loss of over \$3 billion in foreign currency, but even worse is the fate of over 54,000 people working in the tourism sector.

On a more hopeful note, Abbasi said that the big drop in oil prices means that Jordan's energy bill will also go down by about 50%, or \$1.6 billion, in 2020. He added that a cheaper dollar — the Jordanian dinar is pegged to the dollar; 0.709 Jordanian dinar is \$1 — will also boost Jordan's exports, especially to European and Japanese markets.

Former Minister of Economic Affairs Yusuf Mansour believes those most affected will be workers and service providers in the informal economy, such as farmers, barbers, fast food workers and taxi drivers, who make up between 30-40% of the workforce. "The majority have no social security or benefits and live from day to day," Mansour said. In his view, recovery will be slow and painful because, unlike rich countries, "Jordan suffers from fiscal inflexibility, meaning it cannot launch a multibillion-dollar stimulus plan because it does not have the resources. It has to borrow to save the economy."

He called on foreign governments and the IMF to take up measures like longer grace periods, debt postponement and even debt forgiveness. "This is a pandemic, and rich countries have to help poorer ones so that we can all survive this global and unprecedented challenge," Mansour said.

Osama Al Sharif is a veteran journalist and political commentator based in Amman who specializes in Middle East issues. (Al-Monitor 23.03)

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11.4. GCC: Oil Outlook &, Coronavirus Challenge Gulf's Economic Diversification

On 19 March, Robert Mogielnicki posted in the <u>Arab Gulf States Institute in Washington</u> that the region's digital economy is poised to play a greater role in economic diversification strategies as crisis management measures give way to longer-term planning.

Gulf policymakers are bracing for the impact of oil prices sliding below \$30 per barrel and surging coronavirus cases disrupting global markets. Many of the short-term, negative impacts on Gulf Arab states from both developments will be shared by countries across the globe. Yet the structure of Gulf Arab economies and the region's economic development trajectory will complicate government efforts to rebound from these unprecedented and interrelated crises.

Economic diversification away from hydrocarbon revenue remains an ongoing, expensive process in the Gulf states. The high-priority, non-oil industries earmarked for diversification efforts rely heavily on the transnational flow of international visitors and physical goods. Like the oil industry, these segments of Gulf economies have experienced abrupt shocks and appear poised for a difficult 2020.

Governments have launched emergency stimulus packages to provide immediate economic relief to residents and firms as well as liquidity to financial institutions. However, longer-term spending strategies in the Gulf states must consider greater attention to economic diversification initiatives. Digital industries and other forms of remote service provision are likely to become central features of Gulf economic diversification plans once crisis management measures subside and longer-term economic planning resumes.

Elusive Diversification

Slow-moving, expensive processes of economic diversification away from hydrocarbon revenue have left Gulf Arab countries precariously dependent on a volatile energy sector. The collapse of the production agreement between the alliance of OPEC and non-OPEC producers, OPEC+, in early March sent oil prices, which were already in decline, plummeting. The price of Brent dropped from \$58.80/bbl on 20 February to \$24.67/bbl on 18 March – its lowest since 2003.

As Brent crude oil averaged \$64/bbl in 2019, many Gulf Arab governments prepared 2020 budgets based on oil price assumptions ranging from \$55/bbl to \$60/bbl. With much lower prices, expected deficits are set to widen. Moreover, much of the crude exported from Gulf Arab states is destined for Asian countries, and some Gulf exporters are heavily dependent upon a single trading partner. Oman, for example, not only relies on oil and gas exports for nearly 72% of government revenue, but China also purchased between 75% and 95% of Omani crude oil exports in 2019.

The share price of Saudi Aramco reached a low of \$27.80 on 16 March, a drop of nearly 27% from the firm's peak share price of \$38 in mid-December 2019. The Saudi government marketed the initial public offering of Saudi Aramco as the centerpiece of its ambitious economic transformation program, which involves capitalizing the Public Investment Fund and encouraging future privatizations of government entities. A declining Aramco share price leaves both the Saudi government — Saudi Aramco's largest shareholder — and private investors vulnerable. Saudi Aramco's chief financial officer said that the company was "very comfortable" with \$30/bbl oil prices. But governments in Riyadh and neighboring Gulf Arab states are unlikely to find comfort in these oil prices.

The Gulf region's non-oil industries offer little hope for a swift economic rebound. Many industries considered pillars of economic diversification in the region – including tourism and hospitality, aviation, and logistics – confront unprecedented challenges. The World Travel and Tourism Council expects the coronavirus outbreak to shrink world travel by 25% and put 50 million jobs at risk. Tourism accounts for an estimated 12% of the United Arab Emirates' economy. Dubai's hotel occupancy rates in February decreased by 9.4% and revenue per available room – a performance measurement calculated by multiplying the average daily room rate by the occupancy rate – dropped by about 23%. Abu Dhabi closed major tourist attractions, such as the Louvre Abu Dhabi museum and the Ferrari World theme park. Drastic measures to restrict the in-country movements of Gulf residents will hamper domestic tourism and local entertainment activities across the region.

Industries directly facilitating the physical movement of people and goods will likewise suffer. According to the International Air Transport Association, Gulf airlines could face revenue losses of \$7 billion as a result of the outbreak. These estimates are likely to be revised upward as international transportation hubs in the region grind to a halt. Gulf airlines were already struggling. Abu Dhabi's national carrier Etihad viewed losses of \$870 million in 2019 as "encouraging," following cumulative losses of \$5.62 billion since 2016. Supply chains connecting Gulf economies with Asian and European counterparts are being disrupted, forcing Gulf-based logistics firms to reconfigure trading routes. Officials at ports, warehouses, and bonded zones expect significant decreases in cargo volumes.

Gulf governments swiftly rolled out economic stimulus packages to shore up their countries' economies. The Saudi Arabian Monetary Authority announced \$13.3 billion in spending to support the private sector, while the UAE's central bank launched a \$26 billion economic stimulus package. Individual emirates implemented additional fiscal measures. Abu Dhabi committed to fast-track key initiatives associated with Ghadan 21, a three-year, \$13.6 billion program launched by the crown prince of Abu Dhabi; it also plans to create a new lending committee within the Department of Finance and offer a variety of subsidies and fee exemptions. Dubai's crown prince, Hamdan bin Mohammed al-Maktoum, launched a \$408.4 million stimulus to cushion the impact on the emirate's residents and companies for three months.

Qatar announced a \$20.5 billion package of financial incentives for the private sector and encouraged banks to offer a six-month grace period on loan payments. Bahrain's central bank went one step further by mandating that the country's banks and financial institutions offer six-month deferrals on installments for any borrowers impacted by the coronavirus. The Bahraini government's plan for an \$11.38 billion stimulus package represents nearly 30% of the country's annual gross domestic product and would cover private sector salaries for three months. Oman's central bank rolled out a \$20.8 billion incentive package for the country's financial institutions, while Kuwait's Cabinet approved a draft law for \$1.6 billion of funding for government agencies combating the coronavirus.

Long-Term Winners and Losers

Generous economic support packages and exemptions from government fees cannot continue indefinitely. In fact, Gulf Arab governments are simultaneously identifying opportunities for cutting spending. Saudi Arabia's government reportedly requested that government agencies prepare proposals to cut at least 20% from their budgets, and the Saudi finance minister cut the state's budget by \$13 billion, or about 5%. The Ministry of Finance in Oman also cut 2020 budget allocations to government agencies by 5%. When allocating limited expenditures toward economic diversification initiatives, Gulf governments should refocus attention on industries that do not require large influxes of international visitors and foreign goods into Gulf countries.

The region's digital economy is likely to emerge as the biggest winner when the dust settles from the coronavirus outbreak and oil prices stabilize. Industries that create digital value and offer remote services can serve as a hedge against future crises that restrict the transnational flow of people and goods.

Media production, financial technologies, and telecommunications reflect promising economic activities for renewed economic diversification efforts in the Gulf states. The UAE and Oman lifted restrictions on some applications permitting voice calls over the internet, potentially paving the way for greater commercial liberalization in Gulf telecommunications sectors – areas of regional economies typically dominated by state-owned firms. Digital free zones or virtual commercial cities, such as those pioneered by Dubai, present opportunities to generate revenue from a global consumer base.

The big losers are likely to be expensive, long-term development initiatives. Projects with hefty price tags, such as Saudi Arabia's \$500 billion Neom megaproject-cum-free zone or Kuwait's \$86 billion Silk City megaproject, seem fanciful under the current circumstances. Future phases of development may be scaled back or postponed.

Traditional approaches to economic diversification by the Gulf Arab states have left them with minimal maneuverability to confront the urgent economic challenges of 2020. The Gulf states cannot avoid the economic fallout from low oil prices and the coronavirus outbreak, but governments can take decisive steps to make their economies more resilient in the future.

Robert Mogielnicki is a resident scholar at the Arab Gulf States Institute in Washington. (AGSIW 19.03)

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11.5. KUWAIT: IMF Executive Board Concludes 2020 Article IV Consultation with Kuwait

Released on 30 March, this Staff Report was prepared by a staff team of the IMF for the Executive Board's consideration on 24 March. The staff report reflects discussions with the Kuwaiti authorities in January 2020 and is based on the information available as of 2 March. It focuses on Kuwait's near and medium-term challenges and policy priorities and was prepared before COVID-19 became a global pandemic and resulted in unprecedented strains in global trade, commodity and financial markets. It therefore, does not reflect the implications of these developments and related policy priorities. The Supplementary Information is based on the information available as of 12 March. The outbreak has greatly amplified uncertainty and downside risks around the outlook. Staff is closely monitoring the situation and will continue to work on assessing its impact and the related policy response in Kuwait and globally.

The Executive Board of the <u>International Monetary Fund (IMF)</u> concluded the Article IV consultation with Kuwait and considered and supported the staff appraisal without a meeting.

Non-oil growth strengthened to estimated 3% in 2019, propelled by government and consumer spending. With oil output contracting by 1%, broadly in line with the OPEC+ agreement, overall growth slowed to estimated 0.7% in 2019 from 1.2% in 2018. Fiscal and current account surpluses narrowed on account of lower oil prices and output. Inflation rebounded to 1.1% as food and transport prices recovered. Credit growth accelerated to 4.4% in 2019, spurred by relaxation of macro-prudential ceilings on personal loans and supportive monetary conditions.

The underlying fiscal stance loosened in FY2018/19. The nonoil balance excluding investment income in percent of nonoil GDP deteriorated as government spending continued to rise. Fiscal financing needs - the overall balance after compulsory transfers to the Future Generations Fund (FGF) and excluding investment income - remained large at 7.7% of GDP. Lacking borrowing authorization since October 2017, the government had to continue drawing solely on General Reserve Fund (GRF) assets for financing, which brought its total and liquid balances down to 56 and 24% of GDP by June 2019. Combined FGF and GRF assets continued to grow however, as the FGF generated strong returns and received mandatory transfers from the government.

The banking system remains sound. The system wide capital adequacy ratio reached 17.6% in September 2019, and banks have plentiful short-term liquidity. Nonperforming loans net of specific provisions remain low, while loan-loss provisioning is high. Net interest income declined due to a narrowing spread between bank lending rates and cost of funds.

The real estate market has stabilized and equity markets outperformed in 2019, in part thanks to the inclusion in emerging market indices.

Executive Board Assessment

The challenge to reduce dependence on oil and boost savings has become more urgent. The subdued forecast for oil revenues is weighing on near-term growth and fiscal and external balances. This has heightened the need for reforms to create a vibrant private sector and ensure adequate savings of the exhaustible oil wealth for future generations. Kuwait has large financial buffers and low debt, but the window of opportunity to tackle its challenges from the position of strength is narrowing.

Without a course correction, fiscal and financing challenges will intensify. The recent run up in hard-to-reverse spending weakened the underlying fiscal position. At current policies, the overall fiscal balance would turn into a growing deficit, which, after mandatory savings in the FGF, would give rise to large financing needs over the medium term. Borrowing should be viewed as a temporary solution—while slowing the depletion of liquid financial assets, it would lead to a rapid debt buildup.

Kuwait needs ambitious, growth-friendly and socially equitable fiscal adjustment. Staff's proposed adjustment would cut current expenditure, by tackling spending rigidities, boost nonoil revenue, and create space for growth-enhancing investment. The large public wage bill should be reformed, and generalized

subsidies and transfers phased out in favor of targeted compensation schemes. As for revenue, the government should initiate broad consultations, redouble efforts to engage parliament, and continue the technical work on the GCC-wide excises and VAT. Taxes on corporate income, luxury items, and personal income of the wealthy could be also considered for a more socially-balanced adjustment mix. Embedding fiscal measures in a comprehensive reform package that promotes private sector growth, strengthens governance and accountability, and improves public services would help build broad support for reforms.

A rules-based fiscal framework would improve management of oil revenues. A rules-based framework would help anchor fiscal policy on a long-term objective of intergenerational equity. It should include a well-calibrated operational rule that helps reconcile long-term savings and near-term economic stabilization objectives. Such a rule would help establish policy predictability, prevent pro-cyclicality, and ensure durable gains from adjustment. To be effective, a fiscal rule would need to be enshrined in a sound institutional framework. Until a properly calibrated fiscal rule is in place, the current arrangement with respect to the FGF should be maintained.

Fiscal governance reforms should be an integral part of the overall fiscal strategy. Reforms should aim to enhance fiscal transparency, modernize public procurement and boost spending efficiency. These steps would reduce vulnerabilities to corruption and strengthen support for fiscal adjustment.

The exchange rate regime remains appropriate. The peg has provided an effective nominal anchor. The proposed fiscal adjustment would close the current account gap over the medium term. As the economy becomes diversified, the arrangement should be periodically reviewed to ensure that it continues to serve Kuwait well.

Financial sector reforms should focus on bolstering resilience and deepening inclusion. To reduce moral hazard, the authorities should enhance the corrective action framework, establish a special resolution regime for banks and unwind the blanket deposit guarantee. CBK's continued efforts to recalibrate macro-prudential tools to balance stability and growth considerations are welcome. Gradually relaxing the interest rate ceiling on commercial loans would expand lending to new market segments, including SMEs. Market forces should be allowed to play a greater role in the allocation and pricing of liquidity to promote interbank market development.

Sustaining reforms to foster private sector-led and diversified growth will be critical. With limited scope for public employment going forward, a vibrant private sector must emerge to absorb the large number of Kuwaitis entering the labor market in coming years. Enabling the private sector to thrive requires reducing the economic footprint of the state, promoting market competition, and improving the business environment. To that end, further efforts are needed to revamp insolvency framework, reduce excessive regulations, and ease trading across borders. To incentivize Kuwaitis to seek private sector opportunities, public sector wages should be aligned with those in the private sector, accompanied with improvements in education and training programs to nurture entrepreneurship and equip graduates with skills for in-demand jobs. (IMF 30.03)

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11.6. EGYPT: Egypt's Expanding Military Economy

Mahmoud Khalid posted in <u>Sada</u> on 26 March that couched as national security measures, Egypt has passed a series of new laws and agreements are giving the military economy far-reaching control.

Egypt's Sovereign Wealth Fund signed a cooperative agreement on 3 February with the National Service Projects Organization (NSPO). The NSPO is an apparatus affiliated with the armed forces that was established during the late President Anwar Sadat's leadership to ensure self-sufficiency in the needs of the armed forces. It created surplus production in the local market, including construction, agriculture, food and dairy. The NSPO also assisted economic development projects across the country, such as infrastructure and development projects in border provinces. Under President Abdel Fatah Al-Sisi, the

NSPO's powers have gradually expanded. The recent agreement is an attempt by the Egyptian Armed Forces to make NSPO's assets more attractive to local and foreign investment and expand its ownership base by selecting economically successful companies affiliated with the NSPO and putting their shares for purchase on the stock exchange. Now, it is the biggest engine of the country's economy, participating in all aspects of life and competing with the private sector.

The cooperative agreement between the NSPO and the Sovereign Wealth Fund comes just two months after the Egyptian cabinet approved amendments to a state assets law. Sisi established this law, or Egypt Fund Law No. 177 of 2018, to develop the state's resources. However, the fund opens the door for the exploitation of the assets and resources of the state, including closed or untapped government companies and factories that achieve low profits. The fund can sell these assets and properties to earn profit and attract investment. On 26 December 2018, the Council of Ministers approved amendments to the law, giving the president the right to transfer the ownership of any of the unexploited assets owned by the state to the fund. According to the decree's text, no person is allowed to file claims for the invalidity of contracts concluded by the Fund. Courts are obligated not to accept these civil appeals or claims related to these disputes. The Fund has the right, by the president's decision, to own the company or factory with the newly-transferred ownership, and to sell it to any foreign investor without any difficulties. In other words, if the ownership of any government company is transferred to the fund, and then the fund sells the company to an investor or puts it on the stock exchange, no citizen has the right to dispute the outcome.

State media was quick to celebrate the February agreement, stressing that it is in the best interest of both real economic output and citizens. The deal attempts to stimulate stagnant capital and worsening stock markets, which reveal a loss of confidence in the regime. Such conditions are reflected in Egyptian investors and businessmen's refusal to invest in their countries capital and companies. The agreement thus follows a large decline in investments and a severe increase in debt over the past few years, despite the painful, IMF-driven economic reforms implemented by the Egyptian Government which have yet to pay dividend. Egypt's economic freefall has put the government in a precarious position. The Central Bank of Egypt (CBG) previously disclosed that Egypt saw a decline of roughly \$1.8 billion in FDI and an inflation rate of 23% during the 2018-2019 fiscal year. Egypt received \$5.9 billion in FDI for the 2018-2019 financial year, compared to \$7.7 billion in FDI during the 2017-2018 financial year. Also according to CBG official reports, foreign debt has risen by \$16.1 billion, reaching \$108.7 billion at the end of June 2019. This reflects a 17.3% increase from the end of June 2018. This poor economic performance pressured the regime into rebuilding NSPO's reputation, which has been tarnished by revelations of Egyptian contractor Mohammed Ali.

The agreement followed Sisi's announcement - during the opening of the Medical and Industrial Gas Factory No. 3 of Al-Nasr Chemical Company in October 2019 - to hold an initial public offering (IPO) for the military's infrastructure and agricultural companies. According to the president, "these companies must enter the stock market and give Egyptians the opportunity to own stock in them. We are opening the door for a societal partnership..." Sisi's statement came after Mohammed Ali began publishing a series of videos on social media—the first of which appeared on 3 September 2019 and received nearly 1.7 million views. The videos exposed instances of financial corruption and mismanagement of public funds across economic sectors, including the Engineering Agency of the Armed Forces, which involved in infrastructure projects around the country. The videos also revealed that Amlak Contracting, which is now owned by Sisi, has been working with the Armed Forces for the past 15 years. Muhammad Ali, who owned Amlak, was able to uncover facts of the military's squandering of public funds as his company had several construction contracts with the military and possessed insider information of the government's lucrative deals.

Ali's videos and the light they shed on corruption within the military, pressuring Sisi to respond directly to the accusations leveled against the army. In an attempt to absolve the army from Ali's accusations, Sisi stated, "I swear to God this is lies and slander...this is lies and slander. The Army is a closed institution that is very sensitive to any inappropriate behavior, especially when leadership is involved." Sisi has sought to exonerate the military establishment by pushing for an IPO in full view for Egyptians and the private sector. However, Sisi's suggested that IPO is facing obstacles that hinder its realization.

For a company to be listed on the stock exchange, it must fulfill a number of conditions—among them are disclosing the company's capital, profits, sources of financing, expenditures and tax history. While these conditions might be minor obstacles for companies under NSPO's authority, no individual or institution has been able to pressure them to disclose this information. Officials often reject disclosing their finances by arguing on the basis of "national security," although the companies' work generally has no connection to military operations.

The military's secretive economy is nothing new. For decades, the military's economic activity has been operating with secrecy, with regard to its profits and the extent of its tax payments, the size of its investments, and its capital. Even more, no regulatory body has been able to challenge them, including the Central Auditing Organization (CAO)—the highest auditing authority in Egypt. During an official interview in 2012, Hisham Genena, former head of the CAO, explained the challenges to auditing military-owned companies that have no connection to national security and do not necessitate total secrecy. A notable example involves the armed forces renting out venues, for instance weddings halls, for large sums of money without any monitoring. Genena stated, "it is unacceptable that the CAO cannot monitor the wedding halls belonging to the armed forces. What is the connection between the military's wedding halls and national security?"

In 2018, Sisi's government also passed a "contracting law," No. 182 of 2018, which allows the military and the military's companies an exemption from oversight and auditing. It stipulates that executing contracts, without an option for public bidding, helps fulfill the goal of "protecting national security." This means that government agencies, under the guise of national security, are able to obtain the company, investment, or plot of land without disclosing its price to external investors. The law ultimately allows these companies absolute secrecy in their purchasing, selling, and general profiting from contracts. This has led to a lack of transparency and, therefore, a lack of competition from the private sector. While these difficulties have persisted before 2018, the law solidified the inability to audit military-owned companies, ultimately making the practice illegal.

Under Sisi, the military economy has developed into a far-reaching organization. Military companies now operate in in the dairy, pharmaceutical and transportation industries. According to the military's spokesperson, Colonel Tamer Al-Rifai, they oversee 2,300 projects with 5 million civil employees across the country in heavy and specialized industries, including agriculture, seafood, mining, general contracting and infrastructure.

Sisi's insistence on an IPO indicates his desire to repair the military's reputation and to clear it of accusations of corruption, misuse of public funds, and unaccountable control of state economy. Sisi also hopes to please the International Monetary Fund (IMF), which has voiced its concerns about military involvement in the economy. The IMF believes the military's involvement creates unfair competition, potentially impeding new foreign and domestic investments. David Lipton, the IMF's first Deputy Managing Director, expressed his reservations during an IMF delegation visit to Egypt to review the implementation of an economic reform package. Lipton was alarmed at the growth in work carried out by military companies under the guise of private ownership.

Through the IPO, Sisi hopes to send the message that all sectors of Egypt's economy including industries in which the military has a monopoly and until now have been highly profitable - are now open to foreign investors. But despite the government's persistent efforts to encourage investment, through the upcoming IPO, through regulatory reforms and a bold economic reform package, the external debt continues to accumulate. FDI is decreasing (by 23% between 2017 and 2018) and investors remain unwilling to invest in the Egyptian market. As such, the regime's efforts to encourage investment are unlikely to bring greater transparency to the military's involvement in the economy. Meanwhile, "the protection of national security" will remain the argument to justify any future policies the regime might pursue.

Mahmoud Khalid is an Egyptian journalist specializing in Arab and international affairs. (Sada 26.03)

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11.7. SAUDI ARABIA: Implications of the Saudi Corruption Arrests

Simon Henderson posted in <u>The Washington Institute</u> on 16 March that the latest crackdown appears to have targeted senior defense and interior officials, spurring speculation that they are linked to previously detained princes rumored to be plotting a coup.

On 15 March, Saudi Arabia announced that 298 individuals have been arrested for bribery, embezzlement, wasting public funds and other corruption offenses. Although none of the detainees has been named, they reportedly include high-ranking officers in the Defense and Interior Ministries, adding to rumors that recent royal crackdowns may be related to a planned coup.

According to Saudi media and the government's anti-corruption body, the arrests followed criminal investigations during which 674 individuals were questioned. The total sum embezzled is over \$100 million, making these latest cases much smaller in scale than those seen in late 2017, when more than 300 businessmen and princes were detained in the Riyadh Ritz-Carlton on corruption charges. Most of those individuals were subsequently released, but only after paying a reported total of \$100 billion to make up for years of exploiting their positions.

According to Reuters, among those implicated in the latest announcement are eight officers from the Defense Ministry "suspected of bribery and money laundering in relation to government contracts during the years 2005-2015," as well as twenty-nine Interior Ministry officials from the oil-rich Eastern Province. They include three colonels, a major-general, and a brigadier-general.

The end date of that investigation period is particularly noteworthy for two reasons: (1) before ascending to the throne, King Salman himself served as defense minister beginning in 2011, and (2) his favorite son, Muhammad bin Salman (aka MbS), has held the position since 2015. Now that he has become crown prince and the country's de facto ruler, MbS leaves day-to-day running of the ministry to his deputy and younger full brother, Khalid bin Salman.

Traditionally, Saudi corruption—particularly in the defense sector—has been a top-down mechanism for enriching princes and winning multi-billion-dollar contracts. According to insiders, the commissions (bribes) offered by foreign contractors are treated as standard additional costs that are ultimately paid by the Saudi side rather than the contractor. This self-bribe is a given amount—a firm's willingness to pay more does not alter who will be given the contract.

From a foreign defense supplier's perspective, at least part of the commission's purpose is to smooth the company's operations while it fulfills the contract. The key is how (and how much) the corrupt minister or military commander in question allows the money to trickle down to the more junior-level officers who manage the contract at the working level. The name of Prince Sultan, King Salman's elder brother who served as defense minister from 1963 until he died in 2011, is still synonymous with huge payoffs. Occasionally, a prince's greed would become so egregious that he was removed from his post and sidelined. In all, the Defense Ministry, Interior Ministry (which mainly deals with security), and Saudi Arabian National Guard have spent billions on foreign-supplied equipment in recent decades.

MbS has condemned corruption during his tenure, but his actions against major culprits have concentrated on his princely rivals and, publicly at least, avoided targeting his perceived allies within the House of Saud. Earlier this month, he reportedly ordered authorities to detain or question several royal critics, including former crown prince Muhammad bin Nayef (aka MbN), who once led the Interior Ministry; MbN's brother, Saud bin Nayef, who serves as governor of the Eastern Province; and Interior Minister Abdulaziz bin Saud, the governor's son. Even if there is no link between those orders and the latest wave of arrests, both developments are additional moving parts in the already-convoluted machinery of Saudi royal politics, alongside family schisms, coup rumors, an oil price war with Russia, and the looming health crisis posed by the coronavirus, which may have reached the kingdom via its regional adversary, Iran.

Simon Henderson is the Baker Fellow and director of the Bernstein Program on Gulf and Energy Policy at The Washington Institute. (TWI 16.03)

11.8. TUNISIA: For Tunisia, Recovery Means Modernizing Economy

Elizia Volkmann wrote on 17 March in <u>Al-Monitor</u> that Tunisia's new government faces the formidable task of reversing the economy's downward spiral of the post-revolutionary years with an eye toward becoming a gateway to Africa.

The main challenge for Tunisia's new government, which was finally voted in on 26 February, is to rebuild Tunisia's economy and unlock its untapped potential to be an economic gateway to Africa. But right now things are incredibly fragile.

Now that the newly appointed ministers are settled into their posts, the main task at hand is rescuing Tunisia from the perilous downward economic spiral of the post-revolutionary years. Although this quarter's inflation and unemployment have fallen somewhat, they are not indicators of a spontaneous recovery.

Since 2016, growth has emerged in small segments such as tourism and the textile industries. But data published by the German data analytics website Census and Economic Information Center shows entrenched economic stagnation with Tunisia's foreign borrowing having risen from 50% of the GDP in 2010 to 99.4% of GDP in 2018.

Outspoken economic consultant Ezzedine Saidane told Al-Monitor, "Things really don't look brilliant; overall the growth rate in 2019 was less than 1%." Saidane explained that Tunisia's burden of debt has become unbearable. "1% is less than the real cost of borrowing," he added, saying, "The question is whether this level of debt is sustainable, and if Tunisia is still in a position to pay back its debt normally and on time."

William Lawrence, a former US diplomat working on North Africa and currently a lecturer in International Service at The American University, told Al-Monitor, "Tunisia has been on the post-revolutionary 'J-curve.' Countries go down after revolutions and Tunisia is still stuck at the bottom of the J." Lawrence said that part of the problem is the International Monetary Fund, which has loaned Tunisia \$2.8 billion for economic recovery and disbursed the final \$247 million tranche of the loan in June of last year. "The IMF is still imposing various forms of austerity [measures]. You cannot fix Tunisia by cutting government spending. Tunisia needs fiscal stimulation," Lawrence explained.

Tunisia is at a political crossroads and needs to counter the decline in public faith in government. Tunisian polling company Sigma Conseil's recent polls of 25 January showed that 75.5% of Tunisians believe the country was on the wrong path. The poll also reported an upsurge in support for the right-wing populist Free Destourian Party led by Abir Moussi, an acolyte of deposed President Zine El Abbedine Ben Ali.

A 4 March paper by the International Crisis Group cautioned the Tunisian government of the urgent need to address the economy and rapidly improve public services if it is to regain public confidence and avoid a descent into populist extremism.

Saidane said that the government cannot test people's patience any longer. "Tunisians are impatient. They've lost 40% of their purchasing power. They're impatient because the economy has not created jobs."

Tunisia desperately needs inward investment, but according to the Foreign Investment Promotion Agency's figures published on 7 March, foreign investment fell by a further 7.6% in 2019. Saidane stressed, "The government must start investing," adding, "Only then will the private sector start investing and only then can you talk to foreign investors." According to Hichem Ben Fadhel, fintech entrepreneur and co-founder of the blockchain development company Tledger, Tunisia's economy needs a bold new strategy as well as investment. Ben Fadhel told Al-Monitor, "Tunisia is blocked in the same pattern: The government is taking on debt to make reforms. Reform means that the government is trying to increase the efficiency of the existing system that is not working."

Ben Fadhel says outdated bureaucratic processes such as "government authorizations" that control issues such as business incorporation or operating licenses are stopping business in its tracks and blocking any real development. He believes that Tunisia's "19th century, colonial style" public administration system needs to be completely replaced. Ben Fadhel said that in the "new democracy, services should be built to serve the citizen, and should be made simpler and more efficient."

Ben Fadhel believes that allowing Tunisians to make money more easily will also bring a natural end to the persistent problem of corruption. He said, "Corruption will reduce as a consequence of people making more money." Despite his criticisms, Ben Fadhel is an optimist for Tunisia's future. "The digital economy will help open the market and make the dinar convertible, which, in turn, will help improve the public services. It is beginning very slowly, but if we are optimistic the pace will quicken."

Ben Fadhel's co-director, fintech developer Amin Ben Abderrahman, told Al-Monitor that he is quite certain that a change is finally coming and that previously problematic processes such as opening a bank account will soon become much easier. He said, "The Central Bank of Tunisia has been putting real effort into tackling the issue of financial inclusion." Ben Abderrahman explained that the Central Bank now understands the benefits of fintech and also the needs of business startups. "The governor of the Central Bank is finally giving licenses for fintech payment institutions. Two institutions will be licensed so they can offer the tools to create apps and empower people to build Tunisian-made solutions."

Financial strategic intelligence consultant Mohamed Balghouthi told Al-Monitor that he believes that Tunisia needs to stop trying to repair old industries such as phosphate extraction. It should maximize Tunisia's wealth of scientific and engineering research and dive headlong into the "fourth industrial revolution" that involves such tech advancements as nanotechnology, biotech and robotics.

Balghouthi is currently leading a team developing Tunisia's first Economic Intelligence Agency, a digital portal that will give Tunisian and international investors easy access to market intelligence, information and guidance on regulations to make doing business in Tunisia easier. According to the website Trading Economics, Tunisia currently ranks 78 out of 190 countries in terms of ease of doing business. The project is endorsed by the Tunisian presidency and Balghouthi said he is determined to launch the project no later than September of this year.

Balghouthi believes that by focusing on developing emerging technologies, Tunisia will gain economic parity with its rich European neighbors within 20 to 40 years. "The objective is for Tunisia to enter the global value chain," he said. Balghouthi also talked about the need to integrate Tunisia's "parallel economy" — which he claims accounts for some 48 billion Tunisian dinars (\$17 billion) in lost revenue — into the mainstream. The Tunisian government has been making some efforts in this direction by developing a new type of "free zone" that integrates logistics and trade services with a consumer commercial park near Ben Guerdane, a town notorious for smuggling that lies close to the Libyan border.

The director of the Tunisian Office of Commerce, Ilyes Ben Ameur, showed Al-Monitor the progress made at the site since the project's inauguration on 7 March, which Al-Monitor attended. Ben Ameur told Al-Monitor that Tunisian, Libyan and European investors have shown interest. He said, "The logistics and services center will facilitate trade into Europe from both neighboring and other African countries." He traced the lines on a map showing the position of Ben Guerdane and said, "The gateway to Africa." He added, "The project relies on the private sector to invest and will take three years to complete."

Elizia Volkmann is a journalist and filmmaker based in Tunis. She covers North Africa as a freelance reporter for online and broadcast media, including Al Jazeera, the BBC and EuroNews, focusing on politics, human rights, economic development, clandestine economy and crime. (Al-Monitor 17.03)

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11.9. TUNISIA: Tunisia's Perennial Priorities

Sarah Yerkes and Hamza Mighri posted in <u>Diwan</u> on 20 March that the new Fakhfakh government in Tunisia has the task of addressing the country's enduring socioeconomic challenges.

On 27 February, the Tunisian parliament voted confidence in the new government of Elias Fakhfakh. This followed the failure of Habib Jemli to gain parliamentary confidence after he had been asked to form a government in November 2019, a situation that left Tunisia without a functioning government for over three months.

While the previous government of Youssef Chahed made tremendous progress in creating working democratic institutions, the new government will have to do something much more difficult. It must find a way of addressing the lingering social and economic challenges that brought about the 2010–2011 uprising, such as systemic marginalization of the interior and southern regions of the country, staggeringly high levels of youth unemployment, and rampant corruption. This will take years, if not decades.

In the meantime, the new government, and with it President Qaïs Sa'id, should seek some short-term wins to boost public confidence. It must then shift its focus to four key areas where it can begin chipping away at the myriad social and economic problems facing Tunisians.

There is significant skepticism that the new government will be able to deliver economic improvement, or even survive a full year (let along a five-year term), given its inexperience and the tremendous fracturing of the political scene. Both the president and prime minister were, until recently, relatively unknown on the political scene. Sa'id, a law professor without a political party who barely campaigned for the presidency, won the 2019 presidential elections by a wide margin (nearly 73% of the vote) in a presidential runoff against the controversial, yet politically-connected, businessman Nabil Qaraoui.

Fakhfakh served as tourism minister and finance minister in the Jebali government of 2012–2014, but has been mostly out of the spotlight over the past five years and won only 0.34% of the vote in the 2019 presidential race. Most of the members of Fakhfakh's government, a hodgepodge of ten different parties and independents, have little to no governing experience.

The new parliament is also highly fractured, with 31 different parties or electoral lists and the top two parties, Ennahda and Qalb Tounes, each receiving only 24 and 18% of seats, respectively. This is not surprising in a country with no electoral threshold, but it is a marked departure from the previous parliament, in which the top two parties, Nida' Tounes and Ennahda, received 40 and 32% of the seats, respectively, and included eighteen parties or lists.

Much of the public's frustration with the political class stems from the inability of democratically-elected figures to deliver positive social and economic change to the Tunisian people. Rates of economic growth have not kept up with rising inflation, which reached 7% by the end of 2018. Food prices have increased at a rate of 7.3% per year, with vegetable prices increasing by more than 10% and milk by more than 9%. Additionally, unemployment remains high, particularly among university graduates at 28%. Women are disproportionately affected, with 38% of female university graduates unemployed.

One of the main drivers of the Tunisian uprising was the socioeconomic disparity between the coastal and interior regions. Today, despite the start of a decentralization process that promises to funnel resources toward these regions, the interior still suffers from high poverty rates. These have reached 31% in cities such as Kasserine, Qairouan and Sidi Bouzid, and include difficulties accessing basic education. Tunisians are also dropping out of school at alarming rates and now only receive 7.1 years of schooling, on average. The quality of the country's workforce has deteriorated as a consequence, which has made it more difficult for employers to find competent employees. The situation is exacerbated by a decline in the quality of technical and vocational training schools as well as in the quality of the country's research institutes and the government's decreasing expenditure on research and development.

Additionally, since the uprising, the country has witnessed an unprecedented brain drain. Ninety-five thousand people have left Tunisia, 84% of whom were highly educated. This includes doctors, engineers, computer scientists, and university professors.

Most importantly, despite serious efforts to fight corruption through the establishment of the National Authority for the Fight Against Corruption, Tunisians continue to report high levels of corruption at home. In a 2019 Transparency International survey, 67% of the population maintained that corruption had gotten worse over the previous year, and 64% believed the government's efforts to fight it were unsatisfactory.

The new government has a clear mandate to address the socioeconomic challenges plaguing the country. There are four areas where it should focus efforts toward promoting economic growth and stability in the long term: education, macroeconomic stability, infrastructural improvements and fighting corruption. However, each of these issues will require long-term, systemic changes that will not provide the sort of short-term payoff for which the public is looking. Thus, the government should also identify a few quick fixes in its early days to help build trust.

One critical urgent measure is to combat the rising drop-out rate by providing free transportation to schools in remote areas. Beyond that, the government should focus on modernizing and improving the transportation infrastructure nationwide, with a focus on enabling transit between the coast and the interior.

Another task the government should begin addressing is reforming the education system to bridge the gap between the skills taught and employers' needs, including technical skills and basic employment skills. Additionally, the Education Ministry and the Higher Education Ministry should work together to invest in research and development beginning in high school to assist young Tunisians in finding jobs at home, but also to encourage innovation and expand critical thinking skills.

On the macroeconomic front, reducing the current trade balance is critically important to strengthen the country's macroeconomic stability. This could be accomplished through the ratification and implementation of the Deep and Comprehensive Free Trade Agreement between Tunisia and the European Union (EU). The agreement could provide Tunisia with several benefits, but has been hampered by resistance from the far left and the private sector. Once implemented, the agreement would allow Tunisian products to be sold in the large European market, with its 500 million consumers or more. The agreement would also provide the Tunisian government with technical and scientific assistance from the EU to reform, simplify, harmonize, and digitize the trade procedures at customs and other trade agencies. This is likely to enhance the country's attractiveness to foreign investors.

Tunisia's new government has a tremendous responsibility to deal with some of the socioeconomic problems that previous governments failed to tackle. To be successful, the government should identify and quickly enact short-term measures to begin bringing positive change to the lives of Tunisia's most vulnerable citizens and develop a clear communication strategy to help repair the widening gap between the public and elected leaders.

Hamza Mighri is a Fulbright scholar at the Maxwell School of Citizenship and Public Affairs at Syracuse University, and currently serves as a data analyst for an economic development consulting firm based in Washington, D.C. (Diwan 20.03)

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