

## About us

As part of the Jerusalem Institute for Policy Research, the Milken Innovation Center's work focuses on developing market-based solutions to Israel's greatest challenges as it transitions from a start-up nation to a global nation. Our goal is to accelerate economic growth, build human capital, and cement Israel's role as a pioneer in addressing global challenges in water, food, education, health, and energy with solutions that others can replicate.

The Blum Lab for Developing Economies-Jerusalem is part of the global network of Blum Centers for Developing Economies based at the University of California-Berkeley enabling interdisciplinary problem solving in key areas of energy, health, technology, food, water, health and other challenges to sustainable development. From more information: [www.milkeninnovationcenter.org](http://www.milkeninnovationcenter.org)

## Fellows Programs

Since the Fall, our work has continued unabated despite pandemic disruptions. We learned many positive lessons of adaptation and resilience in these times. Our teaching and training program expanded and has been transformed. We were able to open our Fall course at the Hebrew University of Jerusalem School of Business to students throughout developing economies. Over 46 students joined from Nigeria, Ghana, Namibia, South Africa, Zimbabwe, Kenya, and Ethiopia. Working with the University of Ibadan (Nigeria) and I-Fair (Israel's new incubator in Nigeria); the University of Cape Town, Solidaridad Network (Dutch development NGO), and the International Water Management Institute in South Africa; the Rwandan Development Board, ICT Chamber of Commerce, Kigali Innovation Center, and Rwandan Green Fund; and the Center for Food Security at the University of Addis Ababa. This core course in our Global Development Finance Practice Fellowship—part of the [Global MDP Program](#)—operated in conjunction with the Hebrew University of Jerusalem Business School along with required project implementation plan submission enabled us to qualify and launch our current cohort of Fellows. For a quick introduction to our Fellows program, watch this video [here](#).

As the Hebrew University of Jerusalem Business School course concluded, we rebooted our teaching and training seminar on innovative finance solutions for project implementation at the University of California-Berkeley as well. Moreover, for those extraordinary students in developing economies we were not able to include in our Fellows program, we'll be working with our African partners to schedule a series of project development workshops to enable these initiatives to advance to the future.

Our current Fellows and their assignments include:

- **Gili Almagor** joined us from the Ben-Gurion University's Economics Department and is placed at the Office of the Chief Economist, Israel Ministry of Finance, targeting new credit market channels to increase labor productivity in small and medium-sized businesses.
- **Dr. Maya Shaton** of the Jerusalem Business School continues her work at the Israel Tax Authority on fiscal policies to encourage and expand Israel's high-tech sector.
- **Noam Katzir** with both graduate legal and analytic training related to environmental projects joined us from the IDF Planning Directorate and Hebrew University of Jerusalem. Her fellowship assignment is at the Ministry of Environmental Protection where she is leading an inter-ministerial initiative with private sector support to introduce circular economy solutions (successfully introduced in the water sector) to recycling building solid waste.
- **Adi Hammer** returned from Italy after completing a graduate degree at the University of Milano in sustainable development and is now placed at the Israel Innovation Authority in partnership with the Ministry of Finance, on project finance models to adapt and transfer technology in SDG targets together with multi-lateral development finance institutions.
- **Matan Dahan** completed graduate training in environmental engineering at Munich Technical University and returned to Israel to complete his MBA at Hebrew University. He'll be working on

implementing thermo-chemical treatment technology to recycle agricultural waste for food production in Rwanda.

- **Esther Eshiet** from Nigeria completed her graduate degree in international development at Hebrew University of Jerusalem and interned with our colleagues at Gigawatt Global on the implementation of a solar field in Burundi. She is working to coordinate all of the African Fellows projects who will be working remotely in their home countries with us from Jerusalem, especially focusing on impact investment measures for each project implementation plan.
- **Laura Shalmaev**, recently finished working at the Israel Embassy in Washington, will work on Implementation of the Evergreen Impact Accelerator model that emerged from our recent Financial Innovations Lab (see below) with the Syngenta Foundation and Start-Up Nation Central in India and East Africa.
- **Caleb Ife-Oluwa** from the MDP Program at the University of Ibadan will work on the final model to blend greenhouse digital technologies (driers, processing, solar and precision irrigation) for enhanced productivity in leafy green production in Nigeria.
- **Thaddeus Ochieng** joins us from Jomo Kenyatta University and will be working on operationalizing his blended finance model for cold storage and packaging facility at the ILabAfrica program at Swarthmore University in Kenya.
- **Fatima Umar** is also a graduate of the University of Ibadan's MDP program and is currently working at the UNDP. She'll be developing a public private partnership in conjunction with the Central Bank of Nigeria and Kaduna State for a RBOT (rehabilitate-build-operate-transfer) project financing for field side grain and cold storage for food security.
- **Refilwe Belebesi**, a recent MBA from South Africa, will be working on an agricultural value chain impact fund for her country blending concessional and market-rate investors in conjunction with Solidaridad Network and Grip Capital in Johannesburg.
- **Nonsikelo Nkomo** completed her graduate studies in Economics in the U.K. and returned to Zimbabwe. She will be working on a financial model supported by the government to deploy renewable energy for water and storage for community gardens for local consumption and export in the Beitbridge East District.
- **Nathalie Mutalikanwa** returned recently to Rwanda from her graduate studies in environmental science in Canada. She'll continue working at FONERWA (National Fund for Environment-Rwanda Green Fund) to design the country's first green bond.
- **Alain Michel Gabiro** finished his undergraduate degree in environmental health and MDP from Regis University in 2019. He will also be working on the Rwandan Green Bond project with Nathalie and our colleagues in Kigali and Jerusalem on this important project.

## Financial Innovation Lab



On November 19, 2020 and January 14, 2020, we held two extensive workshops designing the financial model of this agritech mobilization and transfer process for small holder farmers with colleagues from India, Europe, Israel, and the U. S. By 2050 the world's population will grow by 2 billion - over 70% of it in Africa and Asia. It will need much more food, but the industrialized agriculture model cannot be replicated among the Small Holder Farmers (SHF) in Asia and Africa, as land consolidation is not a possibility for political, economic, and social reasons. Unless there is a solution that provides novel technological solutions to SHFs, the low productivity will keep SHFs in poverty, will create food shortages, as well as intensify their significant ecological footprint. We need the next Green Revolution to dramatically increase their productivity, provide these farmers and their countries with food security and increase the standard of living, while at the same time reducing the climate footprint of their food production.

The recent wave of technological developments in agriculture has created a significant supply of high-impact innovative technologies that can be adapted to the needs of small-scale farms. Agritech start-ups that combine small scale delivery systems, advanced biology, sensors, data, and AI-based optimization can revolutionize SHF operations. However, smaller firms tend to focus their efforts on the developed markets, which are much easier to access, many of them are understandably hesitant to risk their future by attempting to access the harder emerging markets. As a result, the world may miss this important opportunity, and the SHFs will continue to languish in poverty.

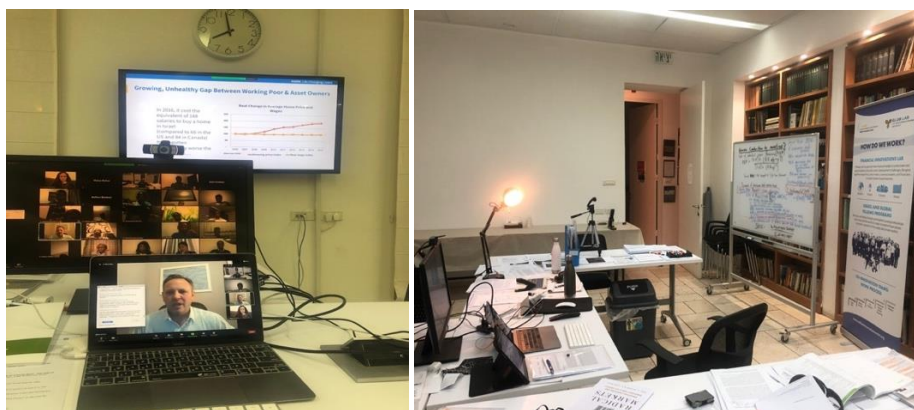
The current proposal addresses this unsustainable situation through an establishment of a platform for bringing innovative solutions to small farmers – The Evergreen Impact Platform (EIP). We propose to create a platform that provides easy, transparent, and inexpensive access for technology firms (even small ones) to SHFs, by utilizing the existing structures and building on the accumulated experience.

The founding members of the EIP consortium: Syngenta Foundation for Sustainable Agriculture (SFSA), Start-up Nation Central (SNC), and the Milken Innovation Center, have extensive experience in establishing access to SHFs in India and Africa, identifying relevant technologies, and working with firms to facilitate adaptation and adoption of these technologies by SHFs to address multiple Sustainable Development Goals at once.

## Updates about Projects



- Israel Citizens Fund, Knesset Hearings**—MK Avi Dichter chaired an important Special Knesset Committee on the Israel Citizens Fund from August-December 2020. We were invited to participate and assist staff work on this process which led to an incredibly productive set of hearings leading to the introduction in October of an amendment to current legislation to begin operating the fund on January 1, 2021. While the final passage of this legislation was delayed (as most things have been) until the establishment of a new government after the upcoming March elections, the Finance Minister signed tax regulations on December 2 that enabled the transfer of tax resources to the Bank of Israel, one of the last remaining barriers to the fund’s formation. The Israel Tax Authority reported that Fund receipts could be as high as \$7 billion over the decade ahead; estimates from other testimony in the Knesset Committee were even higher, as gas production finally expands from 2021 forward. We published a Policy Brief based upon Glenn Yago’s testimony prepared for the Knesset Special Oversight Committee on the Israel Citizens Fund on September 8 ([here](#)) and summarized in this Jerusalem Post article on September 9 ([here](#)).
- Financial Inclusion**—



In November, David Ram, Board Director of the Ogen Social Loan Fund offered an entertaining and detailed overview of the evolution of philanthropic investment models for non-bank credit in Israel over the past decade to our students. He focused on the growing and unhealthy gap between the working poor and asset owners. Noting the urgency raised in our Fellows’ work and Labs on how to bridge that gap, Ram generously recognized our Center’s contribution to this process both innovative policy solutions (e.g., enabling non-bank credit channels to emerge) and programs (transforming NGOs into revenue generating organizations). Ogen’s new business model, he pointed out, emerged in

collaboration with the Milken Innovation Center's work through Labs and Fellows over the past years supported by our considerable work on financial inclusion. Recently, Google also invested a \$1 million impact investment into the new social bank which had attracted over \$52 million of additional impact investments to recapitalize the renewed entity that grew out of the Israel Free Loan Association. Ogen's new capital injections over the past two years enable it to support small business owners to launch, rebuild or expand their activities in light of the COVID-19 crisis. Additionally, the Finance Ministry recently extended state guarantees to Ogen's loans making it the first non-for-profit lender, and one of a very few non-bank lenders, to have such guarantees.

- **Kidron River Restoration Project**—Bank Leumi announced in February that it was selected to lead a 20-year long-term debt financing (in conjunction Amitim representing with 8 defined benefit pension funds) of the 830 million NIS project for the Gihon Water and Sewage Corporation. The project will rehabilitate and purify the river from debris and sewage pumped for decades from Jerusalem and the Palestinian Authority. Upon restoration, the treated effluent will be recycled to irrigate orchards in Israel and the Palestinian Authority as structured in our original financial innovation lab that had been supported by the Goldman Foundation and Kahn Foundation on this project ([here](#)). We continue to explore interest with various ministries, governments, and foundations on expanding this model through related outcomes-based research and training focused on pre-development for similar projects in the region.
- **From ESGs to SDGs and Impact Investments**—Responding to increasing evidence that ESG (environmental, social and governance) investment standards do not have a negative impact on corporate performance, but instead have beneficial impact on long-term returns, the Israel Securities Authority invited us to participate in hearings (December 23) on how to amplify positive impacts in reducing investment risks and maximizing impact and returns. The ISA and other regulators are considering voluntary and mandatory standards for measures to reduce social, environmental and governance risks for investors. Israel has been noted to be lagging behind in these measures promoting sustainable finance ([here](#)).
- **Biomedical Innovations and Commercialization**— We received a great email this week for colleagues who had attended our Financial Innovations Lab on this subject. The FDA approved a new drug to treat a rare and fatal disease, MoCDType A, developed through Origin, a subsidiary of BioBridge. This is the first approved drug to come out of the megafund model. The model was detailed at our last Lab on this subject ([here](#)) by Roger Stein (MIT/NYU) and Nora Yang from NIH. Neil Kumar of BioBridge highlighted his proposed application of the model—to focus the capital structure to support and translate it for rare and orphan disease treatments and development enough of those treatments in parallel to attract investors. Congrats to Neil and the BioBridge/Origin team. An update of these and other models can be found in another Financial Innovations Lab in Singapore by our Milken Institute team ([here](#)).
- **International Development Finance**—Related to our ongoing work on an international development finance platform for Israel, the government published a tender to manage a fund which would raise \$250 million from Israeli institutional investors matched by another \$250 million from the IDB. The resulting \$500 million fund over 15 years would create a long-term investment channel to Latin America to finance water technologies. The Israeli government will offer a guarantee of 10% of the fund's losses absorbing up to \$25 million in potential losses. Based on the work by our Fellow last year at the Israel Innovation Authority, a program was launched to encourage Latin American Pilot Projects in Water Technologies in coordination with the Inter-American Development Bank IDB. Pilots will be launched in desalination, smart water infrastructure and finance policy in Colombia, Guyana, Brazil and Argentina. This work was also advanced by our Fellows in the PMO, Ministry of Finance, Energy and Water, and Environmental Protection.



## Updates on Recent Events

- Innovative Finance, [Treasurers Roundtable](#), July 13, 2020. Annual meeting of global treasury leaders from mission-driven organizations working in developing economies to address treasury challenges to protect donor funds through the highest fiduciary standards to optimize community impact.
- [The Impact Revolution: Building the Investment Pipeline for an Inclusive Economy](#), Milken Institute Webinar, Sir Ronald Cohen, René Karsenti, Julie Monaco, Glenn Yago, Webinar, July 22, 2020. Watch Video: [here](#).
- [KH Impact Fund](#) Investment Board, Impact Investment Opportunities (Q2 2020), August 8, 2020. First career development impact bonds approved in Israel to enable income share agreements for technological skills training (an agreement between a student and a school where in exchange for covering the cost of that student's tuition, the student agrees to pay back a portion of their income after graduation for a set amount of time as long as they are earning an agreed-upon yearly income)
- [“Investing in Impact in Emerging and Frontier Markets,”](#) Milken Institute Webinar, August 11, 2020, Moderator: Glenn Yago; Bonnie Glick, Deputy Administrator, USAID; Amb. Gil Haskel, Head, Israel’s Agency for International Development (MASHAV); Strive Masiyiwa, Founder and Executive Chairman, Econet; Weldon Turner, COO, Gigawatt Global; Malado Kaba, Former Minister of Economy and Finance, Republic of Guinea, Chair, Orabank.
- Sovereign Wealth Fund, “Thinking Differently about the Israel Citizens’ Fund”, Testimony, Submitted to the Knesset Special Oversight Committee on the Israeli Citizens’ Fund, September 8, 2020.
- “How do we work together?” IMAGES Board Meeting, University of Ibadan-Nigeria, September 29, 2020.
- Innovative Finance and Sustainable Development, Orientation for International Development Students, Webinar, Hebrew University of Jerusalem, October 13, 2020.
- Israeli-Palestinian Economic Forum Session—Integrated Business Roundtable, Investment Showcase, October 13, 2020.
- The UAE-Israel Agreement and its Impact on the Israeli-Palestinian Emergent Economy, Israeli-Palestinian Economic Forum, Integrated Business Roundtable, Sagamore Institute, Tally Zingher, Dawsat; Glenn Yago, Milken Innovation Center-Blum Lab for Developing Economies; MK Ayub Kara, Economic Peace Center; Aryeh Lightstone, U. S. Embassy-Tel Aviv, October 20, 2020. View panel video [here](#).
- [Impact Revolution: From Sustainable Development Goals to Solutions](#), October 21, 2020. Sir Ronald Cohen, Chair GSG Impact Investment/The Portland Trust; Eugene Kandel, Start-Up Nation; Baskar Reddy, Syngenta Foundation India; Alix Zwane, CEO, Global Innovation Fund; Glenn Yago (Moderator).
- Ontario Teachers’ Pension Plan Virtual Tour of Israel’s Innovation Platform: Agritech and Life Science Bio-convergence, Jon Medved, Our Crowd; Shmuel Rausnitz, Start-up Nation Central; Anat Naschitz, Orbimed; Anya Eldan, Israel Innovation Authority, December 10, 2020
- Evergreen Impact Tech Platform: Connecting Small Holder Farmers with High Value Technologies, Financial Innovations Lab, November 19, 2020 and January 14, 2021 (Milken Innovation Center-Jerusalem Institute, Syngenta Foundation, Start-Up Nation Central).

## Remembering Yossi Bachar



Yossi Bachar Chairing our Fellows Seminar on “Beyond Bachar”(2009).

Yossi Bachar (center) with Eugene Kandel (Chair, National Economic Council) and Yarom Ariav (Director General, Ministry of Finance) Milken Center Session on Capital Markets, Globes Conference (2013).

With great sadness, we share the loss of one of our great innovators in financial policy thought and action in Israel, Dr. Joseph (Yossi) Bachar died on December 8 at 65 after his battle with brain cancer. Yossi finished his MBA and Ph.D. in Finance at the University of California-Berkeley, taught at Columbia Business School, and headed up a large accounting firm here before becoming a pathbreaking Director General of the Ministry of Finance and then Chairman of Israel Discount Bank. With all of these prestigious posts, we remember Yossi most in his generous and thoughtful participation in our Financial Innovation Labs and conferences, and, most importantly, as a role model and mentor to our Milken Fellows.

Yossi was a pioneer building bridges between California, Israel and the world. He recruited us to work closely with him and his team in Israel and supported and inspired our work to build our program at the Milken Innovation Center in Jerusalem. Initially, he reached out to us when he became Director General of the Ministry of Finance when we hosted an initial seminar in 2004 at the Milken Institute in Santa Monica on his game-changing reforms to introduce competition into the Israeli financial system. In 2005, he was the first to invite us to place our Fellows in the Ministry of Finance and engage us in the process he led which became known as the “Bachar Committee” which our applied research, Labs, and Fellows supported over the following decade. He always opened new doors (and challenges) for our work and insisted that we do more. The Bachar Committee examined the Israeli banking system and proposed reforms that would further reduce government involvement in the financial markets and promote competition by reducing the grip of the highly concentrated banking industry and its embedded power over non-financial markets as well. In more recent years, he became deeply interested in the field of impact investing and followed our efforts to introduce it further with others here in Israel and in new start-up nations in new markets around the world.

Under his leadership, the development of the capital markets in Israel opened new financial channels for Israeli corporations—non-bank finance. The Bachar Committee’s resulting legislation increased competition in credit markets with an emphasis on enabling larger businesses to mobilize debt capital through the bond markets and indirectly expand credit to small and medium sized businesses as well. After years of bank domination by oligopolistic institutions, the Bachar Reforms broke conflicts of interest based on financial concentration over savings, asset management, and securities holdings and operations. Moreover, it opened the door for further reforms through the Ariav, Baris and Strum Committees, fintech initiatives, and Competition Laws that forced de-conglomeration of pyramid organizations led by a small number of business groups that blocked competition. Later, as Chairman of Israel Discount Bank, he encouraged new directions in banking practice enabling and empowered by capital market solutions. Yossi reveled in hosting our Fellows and guests at the HertzLilienblum

Museum of Finance built at the Bank's initial location which portrayed the banking, business and cultural life of early Tel-Aviv.

He was most generous with his time, wit and intelligence in working with our Fellows on their projects related to innovative finance. In 2007, he led a panel on "Israel: Confessions of an Economic Growth Engine" which other powerful thought leaders which included Chief Scientist, Dr. Orna Berry and Maj. Gen. Doron Almog among others to discuss how the still then developing country of Israel could combine smart economic policies with investments in education and innovation to unleash economic potential. The session was not about running victory laps, but Yossi leading a two-hour session dissecting the country's progress and problems. In 2013, he agreed to Chair a session where our Fellows presented their research on the steps remaining to be implemented from the landmark legislation carrying his name. Their report was called "*Beyond Bachar: Next Steps for Financial Reform.*" Yossi opened the session that hot summer day by dryly commenting that he had proudly shown our publication to his mother who took considerable objection to the report's title and its inevitable implication. The day after he died this month, the business press here in Israel reported in a story about recent Israel Securities Authority research that it was time for a "*Bachar 2 Reform*" to deal with unfinished business that Yossi started. Yossi would have greeted that as a more hopeful call to action. Yossi's life and challenges to us all echoed the sage teaching: "It is not up to you to finish the work, but neither are you free to desist from it." Thanks to you, Yossi, for getting us started.

For more information:

<https://milkeninnovationcenter.org/publications/beyond-bachar-next-steps-for-financial-reform/>

<https://milkeninnovationcenter.org/publications/evaluation-of-the-status-of-the-implementation-of-the-bachar-report/>

<https://milkeninnovationcenter.org/publications/reinventing-israels-capital-markets/>