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Executive Summary

Government Programs to Assist Banks in Crisis: Creating an Early Warning System

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About the Koret-Milken Institute Fellows Program

The Koret-Milken Institute Fellows Program accelerates Israel's economic growth through innovative, market-based solutions for long-term economic, social, and environmental issues. The program focuses on connecting government, philanthropic, and business resources that are vital to national growth and development.

Directed by the Milken Institute Israel Center, the Koret-Milken Institute Fellows Program awards annual fellowships to outstanding graduates of Israeli and international institutes of higher education. Fellows serve yearlong internships at the center of the nation's decision-making—the Knesset, government ministries, and other Israeli agencies—and aid policymakers by researching and developing solutions for various economic and social challenges.

In addition, fellows craft their own policy studies aimed at identifying barriers to economic and employment growth in Israel. The fellows' studies, carried out under the guidance of an experienced academic and professional staff, support legislators and regulators who shape the economic reality in Israel. The program offers the ultimate educational exercise, combining real-life work experience with applied research five days a week.

Throughout the year, fellows receive intensive training in economic policy, government processes, and research methods. They acquire tools for writing memorandums, presentations, and policy papers, and they develop management, marketing, and communication skills. The fellows participate in a weekly workshop, where they meet senior economic and government professionals, business leaders, and top academics from Israel and abroad. They also participate in an accredited MBA course that awards three graduate-level academic credits that are transferable to other universities in Israel. The course, which focuses on financial and economic innovations, is taught at the Hebrew University of Jerusalem's School of Business Administration by Professor Glenn Yago, Director of the Milken Institute Israel Center and Director of Capital Studies at the Milken Institute in California.

Fellows Program alumni can be found in senior positions in the public and private sectors. Some serve as advisers to government ministries while others work at private-sector companies or go on to advanced studies at leading universities in Israel, the United States, and Great Britain. Within the program's framework, more than 80 research papers have been published, catalyzing reforms, reducing barriers, bringing about economic growth, and improving the quality of life for Israeli citizens.

The Koret-Milken Institute Fellows Program is nonpolitical and nonpartisan. It is funded by the Koret Foundation, the Milken Institute, and other leading philanthropic organizations and individuals in the United States and Israel.

More about the program: www.kmifellows.org
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In the wake of the 2008 financial crisis, governments around the world have initiated programs to assist the banking industry. While the global situation has slowed Israel's economy, its banks thus far have remained largely unharmed. Given ongoing uncertainty in the local and world economies, however, there's no guarantee Israeli lenders will avoid risk if the next sovereign phase of the global financial crisis continues to deteriorate. This analysis evaluates the compatibility of programs that have been implemented globally with the Israeli banking system should the government need to take supportive measures.

International comparison of bank-assistance programs in the financial crisis

The bank-assistance programs can be classified by type of program into four groups:

1. Government guarantees of the banks' assets and liabilities.
2. Purchase of banks' and financial institutions' assets.
3. Recapitalization of banks and financial institutions.
4. Alternative or hybrid programs.

A comparison of the programs sheds light on some interesting points:

- **Objective, timing and scope:** All of the programs were designed to either bring stability to the banks and financial markets, increase liquidity of credit and assets, or both. Programs initiated in late 2008 were aimed mostly at achieving stability, while those initiated in mid-2009 were focused on increasing liquidity. The scopes of the "stability" programs were considerably larger than the "liquidity" programs.
- **Eligibility and structure of inclusion:** The programs differ in terms of which types of institutions are eligible for assistance (broad range of financial institutions, banks only, specific banks, etc.) and how those institutions were included in the program (opt-in or opt-out).
- **Cost to the receiver:** In almost all the programs, it was noted that the institutions receiving assistance must pay the government for the assistance in some form, either by insurance premiums or by selling assets at a discount price, or accept institutional changes to the firm. In some programs the cost was graduated or risk-adjusted (higher for riskier institutions) while in others, the cost was set at a fixed rate for all the institutions.
- **Direct and indirect cost to government and the local economy:** In addition to the budgetary cost of the assistance programs to government, indirect costs include the increase in risk imposed on the government, creation of future moral hazard and distortion of global and local competition.

- **"Time to market":** The more complex programs, such as those initiated with private- sector investors, took longer to implement. Since time was a crucial factor at the peak of the crisis, the "stability" programs generally were simple.

- **"Time to end":** Many programs with a defined end date were extended. Alternatively, many programs without a defined end date continued for a longer period and possibly longer than necessary.

The Israeli Banking System and Compatibility of the Assistance Programs

A macro-level examination of the Israeli banking system to determine the type of program that would be appropriate to implement in a time of crisis has determined that the characteristics of the Israeli banking system confine the government to a small range of choices. The characteristics and implication are summarized in the table below.

Characteristic and relevant nominal figures of the Israeli banking system	Implication of assistance programs
The Israeli banking system is highly concentrated and composed of five main banking groups, two of which (Leumi and Hapoalim) hold more than 60% of the banking assets in the country.	Each of the five banking groups is virtually "too big to fail."
Total assets of the Israeli banking system are 150% of GDP.	

Characteristic and relevant nominal figures of the Israeli banking system	Implication of assistance programs
Most of the banks' assets are in the form of direct loans to the public (~70% or ~ NIS 800 billion). Most of the banks' assets in Israel are not tradable or transferable. Israeli bank loans are not securitized and the market for asset-backed securities is not very active. The law regulating securitization is still in process.	Programs directed to the banks' tradable assets will have a negligible affect on the Israeli lenders. Guarantee on assets remains an option but is not advisable.
The type and value of securities held in the banks' assets vary between the banks dramatically. Most of the non-Israeli governmental-securities, amounting to NIS 54 billion, are held by only two banking groups (Leumi and Discount). The mortgage-based securities amount to NIS 17 Billion and are held mostly by one banking group (Discount).	
Most of the banks' liabilities are in the form of public deposits (~80% or ~ NIS 900 billion). Twenty percent of the deposits in the banks are liquid, while 30% of the foreign-exchange deposits are liquid. Liquidity tests show that in case of a serious global crisis, the banks in Israel might have insufficient liquidity ratios in foreign exchange. Israel does not keep a deposit-guarantee scheme on a regular basis. By law, the Governor of the Bank of Israel can guarantee public deposits.	In a time of crisis, the most crucial act will be to ensure public trust in the banks and prevent a "run on the banks." This is important in any banking system, but is even more crucial in the Israeli system, which relies on a large liquid base of deposit.

Characteristic and relevant nominal figures of the Israeli banking system	Implication of assistance programs
Less than 10% of banks' liabilities are in the form of bank bonds and debt. Most of which are issued for a long period of time. The banks' debts vary in amount and type. In 2012-2013 the banks in Israel will need to pay out NIS 15 billion for maturing-debt interest and principal.	In the current Israeli banking system, guarantees to bank bonds can assist in increasing bank credit to the public (under certain incentives), but will have a negligible affect on banks' stability.
The market value of the banks is considerably lower than the book value of their equity and has been decreasing.	Recapitalization programs won't be attractive to bank shareholders but will be useful for stability purposes in a time of crisis.

For the benefit of the Ministry of Finance and other institutions, this research created an excel-based-tool that can be used to retrieve the banks' data in a quick and efficient way so the information retrieved can be analyzed as an early warning system for bank failure and potential systemic risk assessment. All the banks in Israel publish their financial reports in uniform excel files to the specification of the Bank of Israel. To use the tool, the end-user must download the banks' excel files, fill in some basic information in a "user form," and, within a minute, the data is collected and retrieved to a pivot-table ready to be used and analyzed.

At this stage, it is impossible to know if, when or how Israeli banks will enter a crisis, so there is no point in designing a program because each problem and situation will have a different program best suited to address the problem. Policy makers, however, should keep several basic principles in mind when designing a program.

1. Design a program fit for a defined problem or objective.
2. Create an expedient incentive scheme.
3. Simplicity.
4. Leveraging government budget as possible and keeping to a budgetary limitation that won't harm the government's ability to meet its obligations.
5. Quick time-to-market implementation. (This point may contradict point 3 in some situations.)
6. Ending government intervention as soon as possible.
7. Transparency of the government-assistance program.

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