

American University Kyiv

A Capstone Project

MSMES AS A KEY DRIVER OF UKRAINE'S RECOVERY: EVALUATING
SUPPORT PROGRAMS, COMPARING INTERNATIONAL PRACTICE, AND
CREATING A BANK-HUB STRATEGY.

МСМБ ЯК КЛЮЧОВИЙ ДРАЙВЕР ВІДНОВЛЕННЯ УКРАЇНИ: АНАЛІЗ
ПРОГРАМ ПІДТРИМКИ, ПОРІВНЯННЯ МІЖНАРОДНИХ ПРАКТИК ТА
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TABLE OF CONTENTS

LIST OF ABBREVIATIONS	3
LIST OF TABLES	2
LIST OF FIGURES	4
ABSTRACT	5
INTRODUCTION	6
CHAPTER 1. CONCEPTUAL AND METHODOLOGICAL FRAMEWORK OF MSME SUPPORT	7
1.1 Role of MSMEs in a Wartime Economy	7
1.2 Approaches to State Support	8
1.3 Approaches and Indicators for Evaluating MSME Support Programs	9
1.4 International Models of MSME Support	9
CHAPTER 2. ANALYSIS OF UKRAINIAN MSME SUPPORT PROGRAMS (2022–2024)	11
2.1 Overview of MSME Support Programs in Ukraine (2022–2024)	11
2.2 Programs of the Business Development Fund (FRP)	13
2.3 Key Results of the “Affordable Loans 5-7-9%” Program	15
2.4 State Portfolio Guarantees for MSMEs	17
2.5 Donor Programs Supporting MSMEs (2022–2024)	19
2.6 Comparative Analysis of Programs	24
CHAPTER 3. INTERNATIONAL EXPERIENCE (KOREA, ISRAEL, JAPAN, MARSHALL PLAN)	28
3.1 South Korea: SME Recovery and Structural Transformation	28
3.2 Israel SME support	32
3.3 Japan SME support	37
3.4 Marshall Plan Evaluation	43
3.5 Cross-country comparison	47
CHAPTER 4. BANK-HUB STRATEGY FOR MSME RECOVERY IN UKRAINE	53
4.1 Role of banks in postwar recovery	53
4.2 Comparative analysis of six banks	57
4.3 Bank-Hub architecture	61
4.4 Integration with FRP / NDI and donors	64

4.5 Impact forecast	67
4.6 Risks and mitigation	70
CONCLUSIONS AND RECOMENDATIONS	73
APPENDIX A. INTENSITY OF MSME SUPPORT INSTRUMENTS (QUALITATIVE MATRIX, BY COUNTRY AND PERIOD)	79
APPENDIX B. KPI INDICATORS AND ILLUSTRATIVE BENCHMARKS BY COUNTRY ...	82
APPENDIX C. COMPARATIVE MATRIX OF MSME SUPPORT INSTRUMENTS BY BANK (2022–2025)	85
APPENDIX D. OSCHADBANK MSME METRICS RELEVANT FOR BANK-HUB DESIGN (9M 2025)	88
APPENDIX E. EXTENDED RISK MATRIX FOR THE BANK-HUB MODEL (2024–2027)	89

LIST OF ABBREVIATIONS

AFD–BOJ — Asian Financial Development & Bank of Japan Conference	IFM / IMF — International Monetary Fund
APA — American Psychological Association	IfM Bonn — Institut für Mittelstandsforschung Bonn
BDF — Business Development Fund	ICR — Internal Credit Rating (contextual, appears in risk sections)
BIS — Bank for International Settlements	KPI — Key Performance Indicator
BOJ — Bank of Japan	KfW — Kreditanstalt für Wiederaufbau (German Development Bank)
CES — Centre for Economic Strategy	
CSIS — Center for Strategic and International Studies	
DFI — Development Finance Institution (contextual, appears through donor sections)	METI Japan — Ministry of Economy, Trade and Industry (Japan)
DFIs — Development Finance Institutions	MoF / MinFin — Ministry of Finance of Ukraine
ECA — Export Credit Agency of Ukraine	MinEconomy — Ministry of Economy of Ukraine
EC — European Commission (appears in citations and analysis sections)	MSME — Micro, Small, and Medium Enterprises
EIB — European Investment Bank	MSMEs — Micro, Small, and Medium Enterprises (plural)
EIF — European Investment Fund	NBU — National Bank of Ukraine
EBRD — European Bank for Reconstruction and Development	NDI — National Development Institution
EU — European Union	OECD — Organisation for Economic Co-operation and Development
EU4Business — EU4Business Programme (European Union SME support instrument)	PPP — Public–Private Partnership (contextual in donor programmes)
FRP — Fund for Entrepreneurship Development (ФПІ)	RDNA2 — Rapid Damage and Needs Assessment 2 (World Bank)
FSR — Financial Stability Report (NBU)	SBA — Small Business Administration (USA)
GDP — Gross Domestic Product	SME — Small and Medium Enterprises
GIZ — Deutsche Gesellschaft für Internationale Zusammenarbeit	SMEs — Small and Medium Enterprises (plural)
IFI — International Financial Institution (appears in donor and hybrid programmes)	UNDP — United Nations Development Programme
IFIs — International Financial Institutions	WB / World Bank — The World Bank Group

LIST OF TABLES

Table 1. Classification of MSME support programs in Ukraine (2022–2024).....	11
Table 2. Key Institutions Supporting MSMEs (2022–2024)	12
Table 3. Main FRP MSME Financial Instruments (2022–2024).....	13
Table 4. Distribution of FRP Programs by Sector	14
Table 5. Role of Oschadbank in MSME Support (2022–2024).....	14
Table 6. Sectoral distribution of 5-7-9 loans (2022–2024).....	15
Table 7. Dynamics of sectoral allocation (2022–2024).....	15
Table 8. Regional Distribution.....	16
Table 9. Efficiency KPIs of the 5-7-9 program (FRP 2024).....	17
Table 10. Structure of Portfolio Guarantee Program (2022–2024)	18
Table 11. Leading Banks under Guarantee Scheme (2022–2024)	18
Table 12. Sectoral Breakdown of Guaranteed Loans	19
Table 13. EU4Business Impact in Ukraine (2022–2024)	20
Table 14. USAID Support for MSMEs (2022–2024).....	21
Table 15. EBRD MSME Risk-Sharing Facilities in Ukraine (2022–2024).....	22
Table 16. GIZ-Linked MSME Support Instruments.....	23
Table 17. KfW Support to MSME Finance in Ukraine	23
Table 18. Overview of Key Donor MSME Support Programs.....	24
Table 19. Efficiency vs Cost (Illustrative KPI Matrix).....	25
Table 20. Scale vs Coverage.....	26
Table 21. SME share in employment & manufacturing value added (south Korea).....	29
Table 22. Effectiveness Matrix of SME Instruments (South Korea).....	30
Table 23. SME VA & Employment Dynamics Across Policy Phases	31
Table 24 Impact of Israel’s SME Credit Grantees.....	36
Table 25. Structure of SME finance in Japan (as of March 31, 2024)	40
Table 26. Marshall Plan ERP aid by main recipient countries, 1948–1951	43
Table 27. SMEs in the economy (latest available data).....	47
Table 28. KPI groups for cross-country comparison	49
Table 29. Key MSME Support Channels in Ukraine (2020–2025, cumulative where available).....	53
Table 30. Illustrative Multipliers from Regional and Donor Co-Financing	55

Table 31. MSME support coverage and financing amounts by six banks (2022–2025)	57
Table 32. Institutional options for the Bank-Hub architecture	63
Table 33. Israel – key instruments linking venture capital, incubators and bank finance	66
Table 34. Oschadbank wartime MSME support (2022-2025).....	67
Table 35. Pilot Bank-Hub simulation with Oschadbank: EUR 300m envelope and multipliers from....	68
Table 36. National simulation of the MSME-dedicated Pillar 2 envelope	69
Table 37. Short risk matrix for the Bank-Hub model	70

LIST OF FIGURES

Figure 1. SME Employment and VA Trends.....	31
Figure 2. Growth of SME Credit Guarantees (KODIT + KIBO)	32
Figure 3. Annual Government-Guaranteed SME Loans in Israel (2007–2013), in millions of NIS.	35
Figure 4. Contribution of SMEs to enterprises, employment and value added in Japan (2015–2016) ...	42
Figure 5. Schematic Flow of MSME Support Through Banks.....	60

ABSTRACT

This capstone is a consulting engagement that addresses three applied questions: (1) what the available market and program evidence suggests about the effectiveness of Ukraine’s MSME support instruments in 2022–2024; (2) how these instruments compare with historical and institutional lessons from South Korea, Israel, Japan, and the Marshall Plan countries; and (3) how a bank-based delivery approach can be structured to scale support under high risk and uncertainty.

The analysis relies on practical evidence from operational statistics, program and administrative reporting, and donor/IFI documentation. Because inputs are fragmented across sources, results are synthesized through a unified KPI logic—drawing on OECD and World Bank evaluation approaches adapted to wartime conditions—and presented in comparative tables and appendixes. Oschadbank is used as a case study with a significant market role to validate and illustrate program findings at bank level: it provides real portfolio dynamics and implementation evidence that supports, and in some cases stress-tests, the conclusions derived from aggregated market data. The work also uses historical context to refine instrument design choices and to translate international experience into feasible steps for Ukraine.

Results show that Ukraine deployed a broad toolkit dominated by subsidized lending and guarantees: over 100,000 loans were issued under “Affordable Loans 5-7-9%” (several hundred billion hryvnias), and over 30,000 loans were covered by state portfolio guarantees. Donor and hybrid facilities increase leverage and program quality (approximately 2–4×). The Oschadbank case indicates strong scaling capacity: its MSME loan portfolio increased more than threefold in 2022–2025, with around UAH 65 billion disbursed, supporting the feasibility of consolidating delivery through a Bank-Hub approach. Scenario simulations suggest that an MSME-focused Bank-Hub envelope of EUR 300 million+ could support several thousand additional investment projects and mobilize over EUR 1 billion when combined with IFI risk-sharing. The capstone concludes with an action-oriented plan to priorities instruments, rebalance support toward risk-sharing and blended finance, strengthen unified data and monitoring, and add a venture/equity pillar for innovative and high-growth firms.

Keywords: MSMEs; Ukraine’s wartime economy; 5-7-9%; Government & IFI’s portfolio guarantees / risk-sharing; Bank-Hub; recovery policy.

INTRODUCTION

Ukraine's full-scale war since February 2022 created one of the deepest economic shocks in Europe since World War II. GDP dropped by 22.8% in 2022, mainly due to massive destruction, migration, blocked logistics, and reduced industrial output. In 2023, the economy showed around 5% growth, mostly because activity resumed from a very low base (NBU, 2024). A UNDP survey found that 91% of enterprises restarted their operations after the first shock, demonstrating high adaptability despite unprecedented losses.

Micro, small, and medium enterprises (MSMEs) play a central role in Ukraine's economy. They make up 99.98% of all registered firms, provide 74% of total employment, and generate about 64% of national value added (MinEconomy, 2024). Their survival is directly linked to economic stability, local resilience, and the country's capacity to recover. However, the war hit MSMEs heavily: at some point after the invasion, 64% of firms suspended operations, though by late 2023 only 9.6% remained at risk of closure. The average financial loss reached approximately \$227,000 per enterprise (UNDP, 2023).

Despite this pressure, Ukrainian MSMEs have shown exceptional resilience. UNDP reports that 84% of suspended companies restarted operations within six months, and many even increased production during 2023–2024. This became possible thanks to strong support from both the Government of Ukraine and international partners. The government launched several large-scale grant and loan programs (microgrants, equipment grants, business relocation grants, etc.), while IFIs expanded risk-sharing instruments, subsidized loans, and SME guarantees (MinFin, 2024; EIB, 2023; BDF, 2025).

However, support measures remain fragmented, implemented by different ministries, agencies, banks, donors, and international organizations. Many programs lack unified KPIs, transparent reporting, and measurable impact indicators. In contrast, global leaders such as the United States, the European Union, Japan, South Korea, and Israel have well-structured SME support models with clear methodologies, cost–benefit analysis, stable monitoring systems, and strong accountability (SBA, 2024; EC, 2024; METI Japan, 2024).

CHAPTER 1. CONCEPTUAL AND METHODOLOGICAL FRAMEWORK OF MSME SUPPORT

1.1 Role of MSMEs in a Wartime Economy

MSMEs are a core element of modern economies, responsible for economic diversification, job creation, and regional stability. Globally, MSMEs account for over 90% of registered businesses and 50–60% of employment (OECD, 2024). In developing and transitioning countries, their role is even larger because MSMEs provide the majority of local services and act as stabilizers during crises.

In Ukraine, MSMEs contribute over 40% of GDP and around 60% of employment (Ministry of Economy of Ukraine, 2024). The sector includes approximately 1.8 million entrepreneurs and firms, the majority of which are microbusinesses. The high share of MSMEs demonstrates their importance for recovery and economic resilience.

Contribution to GDP: MSMEs generate output across all sectors, especially trade, services, agriculture, and light manufacturing. According to the World Bank’s Recovery and Reform Assessment, MSMEs were among the first to resume operations after disruptions in 2022, showing high adaptability (World Bank, 2023).

Employment and job creation: According to the Ministry of Finance, preferential lending programs such as “5-7-9%” helped preserve over 200,000 jobs and create more than 67,000 new jobs in 2023 alone (KfW, 2024).

Regional development role: MSMEs are fundamental for recovery of de-occupied and frontline territories. Their decentralized nature allows them to restart economic activity quickly, stimulate local budgets, and reduce unemployment (BDF, 2025).

MSMEs are Wartime conditions create deep structural disruptions affecting MSMEs. Key challenges include: destroyed infrastructure, supply chain breaks, limited access to finance, workforce displacement, and rising operational costs (NBU, 2024).

Logistics and supply chain disruptions: Many Ukrainian MSMEs lost suppliers or customers due to occupation or destroyed infrastructure. At the same time, new logistics routes increased costs by 25–60% depending on sector (World Bank RDNA2, 2023).

Financial imbalance: Risk levels increased, collateral was lost or moved, and banks faced difficulty evaluating businesses in frontline regions. Despite this, programs such as 5-7-9%, portfolio guarantees, and risk-sharing facilities enabled MSMEs to keep functioning (MinFin, 2024; BDF, 2025).

Economic resilience: International studies define resilience as a system’s ability to absorb shocks and return to a growth trajectory (OECD, 2024). Ukraine shows strong resilience: in 2023 MSME lending grew by over 26% (NBU, 2024), and thousands of businesses relocated or restarted operations.

1.2 Approaches to State Support

Ukraine uses a wide range of financial instruments to support MSMEs. The most effective tools during 2022–2025 include subsidized loans, portfolio government guarantees, grants, and risk-sharing facilities. These instruments help reduce credit risk, lower financing costs, and increase access to capital (Ministry of Finance of Ukraine, 2024).

Preferential lending “5-7-9%.” This is the largest business-support program in Ukraine’s history. By the end of 2023, banks issued 78,964 loans worth UAH 266.9 billion, and in 2023 alone — UAH 97.2 billion (MinFin, 2024). The program preserved more than 200,000 jobs and created about 67,000 new jobs (KfW, 2024).

Portfolio government guarantees work like risk-sharing and cover up to 80% of the loan amount, enabling banks to finance companies with limited collateral. The Business Development Fund (BDF) and the Ministry of Finance operate these schemes together with banks (BDF, 2025).

Risk-sharing with IFIs. IFC and EBRD introduced risk-sharing lines with Ukrainian banks, covering 40–50% of MSME loan portfolios.

Export credit insurance. The Export Credit Agency (ECA) provides export guarantees covering up to 85% of risks, allowing banks to increase trade finance for MSMEs (ECA, 2024).

Tax incentives are an important part of MSME support. Many countries, especially in the EU and South Korea, use targeted tax relief to stimulate investment, innovation, and employment (OECD, 2024).

In Ukraine, tax relief for MSMEs is mainly implemented through simplified taxation for individual entrepreneurs, reduced tax burden for relocated businesses, and special VAT mechanisms for certain industries (State Tax Service, 2024).

Concessional lending remains the backbone of MSME recovery in wartime. Programs combine state funds, IFI contributions (KfW, EU, EIB), and bank delivery channels. This blended model lowers interest rates and enables lending even in high-risk regions (MinFin, 2024).

Germany’s KfW contributed euro 200 million to support the 5-7-9% program and provided performance analytics confirming its impact (KfW, 2024).

In Poland, BGK guarantees supported more than 200,000 MSMEs annually, preserving jobs even during crises (BGK, 2024).

1.3 Approaches and Indicators for Evaluating MSME Support Programs

Evaluating MSME support programs requires measurable indicators. International institutions such as OECD, KfW, EIB, and the World Bank recommend using standardized sets of KPIs focusing on access to finance, job creation, business survival, export activity, and investment capacity (OECD, 2024).

In Ukraine, the main results-based indicators are: number of loans issued, total loan volume, grant disbursement, number of supported MSMEs, number of relocated firms, machinery purchased, and industrial park investments (MinEconomy, 2024).

For example, the Affordable Loans 5-7-9% program preserved over 200,000 jobs and created 67,000 new jobs in 2023, with a total lending volume of UAH 266.9 billion since launch (KfW, 2024; MinFin, 2024).

According to the EU's COSME evaluation (COM, 2024), effective KPIs include: leverage ratio, additionality, default rates, and mobilized private investment (European Commission, 2024).

The macroeconomic impact of MSME programs is measured through multiplier effects, sector recovery speed, contribution to GDP, export growth, and employment stabilization (World Bank RDNA2, 2023).

According to the Recovery Plan of Ukraine, MSMEs are one of the main pillars of regional recovery, and every UAH 1 invested through blended finance instruments generates between UAH 2.5 and 4.3 in economic output depending on the sector (recovery.gov.ua, 2023).

IFI-supported programs such as EIB EU4Business Guarantee and KfW-backed facilities demonstrate high efficiency in post-crisis economies, often providing leverage ratios of 1:8 to 1:15 (EIB, 2023).

Cost-benefit analysis helps compare the economic value generated by MSME programs with the cost of subsidies, guarantees, and administrative expenses. Cost-benefit analysis is widely used by SBA (USA), the European Commission, KfW, and Japan's METI (OECD, 2024).

Japan's post-disaster MSME programs demonstrated that grants covering 75% of costs (JPY 504 billion total) generated rapid recovery in manufacturing clusters (Kashiwagi, 2019; ADB, 2019).

1.4 International Models of MSME Support

The **U.S. Small Business Administration (SBA) Model** is one of the most structured MSME support systems in the world. It includes loan guarantees (up to 85%), disaster relief programs, innovation grants (SBIR/STTR), advisory services, and CBA-based program evaluation (SBA, 2024).

The **EU SME Framework** focuses on access to finance (COSME, InvestEU, EFSI), innovation, technology transfer, and SME competitiveness. Evaluations confirm strong impact of the Loan Guarantee Facility and adherence to strict KPIs (European Commission, 2024; ECA, 2025).

Asian Models are:

Japan focuses on post-disaster MSME resilience using cluster-based recovery, grants (75% cost coverage), and industrial revitalization programs (METI, 2024).

South Korea uses innovation-driven SME development and government-backed venture capital, with strong export support measures (OECD, 2024).

Israel emphasizes tech-based MSMEs, wartime liquidity support, and co-financing for startups (Innovation Authority Israel, 2024).

CHAPTER 2. ANALYSIS OF UKRAINIAN MSME SUPPORT PROGRAMS (2022–2024)

2.1 Overview of MSME Support Programs in Ukraine (2022–2024)

The period 2022–2024 was one of the most transformative phases for MSME policy in Ukraine. The full-scale invasion forced the government, IFIs, and donors to deploy emergency and long-term support instruments aimed at stabilizing businesses, restoring operations and preserving jobs (OECD, 2023).

These instruments can be grouped into three categories: state programs, donor-funded programs, and hybrid programs combining public and IFI resources. Table 1 summarizes this classification for 2022–2024 by funding source and delivery model (state, donor-funded, and hybrid) and lists the main instruments, implementing institutions, and indicative scale. Where the sources provide program outputs for a specific year only (e.g., EU4Business 2022), this is stated in the scale column.

Table 1. Classification of MSME support programs in Ukraine (2022–2024)

Category	Instruments	Implementing institutions	Scale (2022–2024)
State Programs	Affordable Loans 5-7-9%, Portfolio Guarantees, Affordable Leasing, Affordable Factoring	Government of Ukraine, Ministry of Economy, FRP, 46 partner banks	>104,000 loans; >366 bn UAH financing; >32,000 guaranteed loans
Donor Programs	Grants, concessional loans, advisory services, TA, risk-sharing facilities	EU, EBRD, USAID, GIZ, KfW, UNDP	25,500 MSMEs supported (EU4Business only)
Hybrid Programs	Blended finance, donor-backed credit lines, energy resilience grants	FRP + IFIs + partner banks	Leverage effect ×2–4 over state resources

(Sources: FRP Annual Report 2022–2024; EU4Business Report 2023 PDF; USAID CEP 2023 Report; EBRD MSME Diagnostics 2024)

As shown in Table 1, state instruments were primarily credit-based and delivered through the national banking system, while donor-funded programs focused on grants and technical assistance.

Hybrid schemes combined public resources with donor/IFI co-financing and risk-sharing to expand access to finance under wartime constraints.

State programs include the “Affordable Loans 5-7-9%” program, portfolio guarantees, the affordable leasing scheme, and the affordable factoring program, all administered by the Business Development Fund (Fund for Entrepreneurship Development, 2024). These programs are implemented through 46 partner banks and dozens of leasing and factoring companies across the country. State banks such as Oschadbank, PrivatBank and Ukrgasbank account for the largest share of MSME lending (Ministry of Economy of Ukraine, 2024).

Donor programs include the EU4Business initiative, USAID’s CEP and AGRO programs, EBRD advisory and risk-sharing facilities, GIZ energy resilience grants, and KfW grant support for subsidized lending. These programs delivered thousands of grants and significant technical assistance (EU4Business, 2023; USAID, 2023; EBRD, 2024). Beyond the program typology, the effectiveness of MSME support depended on a delivery architecture involving public administrators, partner banks, and international agencies. Table 2 outlines the key institutions supporting MSMEs in 2022–2024 and their primary roles in implementation.

Table 2. Key Institutions Supporting MSMEs (2022–2024)

Institution	Role
FRP	Administrator of 5-7-9, guarantees, leasing, factoring
Oschadbank	Largest MSME lender, partner for grants & risk-sharing
EU4Business	Grants, TA, export support
USAID	Grants, guarantees, agribusiness support
EBRD	PRS facilities, credit lines, advisory
GIZ	Energy resilience grants
KfW	€50m subsidy to refinance 5-7-9

(Sources: FRP Report, 2024; Oschadbank internal data, 2022 – 2025; EU4Business Report, 2023; USAID CEP & AGRO reports; EBRD MSME Diagnostics, 2024; GIZ Project Documentation; Ministry of Finance, 2023)

The institutional mapping in Table 2 shows that program delivery was concentrated in a limited number of nationwide intermediaries (notably state-owned banks and the program administrator), while donors and IFIs complemented them through grants, advisory services, and risk-sharing mechanisms. Hybrid programs combine state and donor funding. Examples include GIZ–FRP energy resilience grants

implemented through partner banks, EU-backed EBRD risk-sharing facilities, and donor-supported leasing and microfinance lines (GIZ, 2024; EBRD, 2024). In summary, state programs ensure scale, donor programs ensure efficiency and targeting, and hybrid programs ensure financial leverage necessary under wartime conditions.

2.2 Programs of the Business Development Fund (FRP)

The Business Development Fund (FRP) administers Ukraine’s largest MSME support instruments. It manages interest rate subsidies, portfolio guarantees, affordable leasing, affordable factoring, and microcredit lines. These tools became the backbone of the wartime MSME support system (Fund for Entrepreneurship Development, 2024). Table 3 summarizes the main financial instruments administered by FRP in 2022–2024, including their type and aggregate volumes over the wartime period.

Table 3. Main FRP MSME Financial Instruments (2022–2024)

Instrument	Type	Volume (2022–2024)
Affordable Loans 5-7-9%	Interest rate subsidy	104,456 loans; 366 bn UAH
State Portfolio Guarantees	Loan guarantees (50% coverage)	32,619 loans; 103.8 bn UAH
Affordable Leasing 5-7-9%	Subsidized leasing	1,807 contracts; 8.1 bn UAH
Affordable Factoring	Subsidized factoring	>400 mn UAH (2023–2024)
Microcredit (KfW)	MSME microfinance	€861m cumulative since 1997

(Source: FRP Annual Report, 2024; Ministry of Finance, 2024)

As shown in Table 3, the Affordable Loans 5-7-9% program dominates the FRP portfolio in terms of both number of supported enterprises and total financing volume. The core FRP instrument is the “Affordable Loans 5-7-9%” program, under which 104,456 loans worth 366 billion UAH were issued between 2020 and 2024 (Fund for Entrepreneurship Development, 2024).

Jobs created and preserved under the program exceed 1 million, making it the largest pro-employment financial program in Ukraine’s history (Fund for Entrepreneurship Development, 2024). The sectoral allocation of FRP-supported financing reflects the structure of wartime MSME demand and is presented in Table 4.

Table 4. Distribution of FRP Programs by Sector

Sector	Share
Agriculture	39–42%
Processing industry	25–27%
Trade	10–12%
Logistics	8–10%
Other MSMEs	10–15%

(Source: FRP, 2024)

As illustrated in Table 4, agriculture and processing industries account for the largest shares of FRP-supported financing, reflecting the priority given to food security, value-added production, and logistics resilience during the war.

The state portfolio guarantees administered by FRP and the Ministry of Finance support another 32,619 loans totaling 103.8 billion UAH, with default payouts remaining under 1.5% of the guarantee fund (Ministry of Finance of Ukraine, 2024).

The Affordable Leasing 5-7-9 program disbursed over 1,807 leasing contracts worth 8.1 billion UAH, mainly financing agricultural machinery and logistics equipment (Fund for Entrepreneurship Development, 2024).

The Affordable Factoring Program, launched in 2023, quickly scaled to a portfolio exceeding 400 million UAH across 10 banks (Fund for Entrepreneurship Development, 2024).

Oschadbank plays a leading role in implementing FRP programs as one of the key partner banks. Key indicators of its involvement in MSME lending and donor program implementation are summarized in Table 5.

Table 5. Role of Oschadbank in MSME Support (2022–2024)

Indicator	Value
Share of Ukrainian economy financed	15%
Share of MSME clients receiving donor/state support	50%
IFI + donor grants channeled	1.5 bn UAH
Loans to frontline MSMEs	20% of MSME disbursements

(Source: Oschadbank internal data, 2022 – 2025)

As shown in Table 5, Oschadbank serves as a major nationwide channel for both state and donor-supported MSME financing, including grant distribution and lending to enterprises operating in frontline regions.

In 2022–2024, Oschadbank channeled over 1.5 billion UAH in donor grants (EU, GIZ and others) to MSMEs, including businesses located in frontline regions (Oschadbank, 2024).

2.3 Key Results of the “Affordable Loans 5-7-9%” Program

Sectoral Distribution of the 5-7-9 Program. The “Affordable Loans 5-7-9%” program is the largest state instrument for MSME support in the history of Ukraine. According to the Business Development Fund (FRP, 2024), more than 104,456 loan agreements were issued between 2020 and 2024, with a total value of 366.0 billion UAH, 103,345 jobs created, and 948,685 jobs preserved (Fund for Entrepreneurship Development, 2024).

During 2022–2024, the program shifted towards supporting critical sectors of the wartime economy: agriculture, food & manufacturing industries, and logistics. As shown in FRP’s official report, which was transferred to the Table 6, more than 66% of the credit volume in 2023–2024 was allocated to agriculture and processing industries (FRP, 2024).

Table 6. Sectoral distribution of 5-7-9 loans (2022–2024)

Sector	Share of loans (%)
Agriculture	39–42%
Food & Processing Industry	25–27%
Trade	10–12%
Logistics & Transport	8–10%
Manufacturing (non-food)	6–8%
Other MSME sectors	8–10%

(Source: based on official FRP report 2022–2024 & Ministry of Economy, 2024)

Changes in sectoral priorities over time are illustrated in Table 7.

Table 7. Dynamics of sectoral allocation (2022–2024)

Year	Agriculture (%)	Processing (%)	Manufacturing (%)	Logistics (%)	Other (%)
2022	33%	22%	14%	9%	22%
2023	37%	25%	12%	10%	16%

2024	41%	27%	8%	10%	14%
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(Sources: Fund for Entrepreneurship Development, 2024; Ministry of Economy, 2024)

Table 7 demonstrates a gradual increase in the share of agricultural and processing sectors between 2022 and 2024, accompanied by a decline in non-food manufacturing. The Ministry of Economy (2024) confirms this shift, noting that agricultural borrowers accounted for over 39% of all loan agreements, while manufacturing accounted for another 27%. These two sectors form the foundation of Ukraine's export capacity and wartime resilience (Ministry of Economy of Ukraine, 2024).

Regional Distribution of 5-7-9 loans shows clear wartime geographic patterns. According to FRP (2024) and Oschadbank (2024), the highest concentration of MSME lending is found in western and central regions, which became relocation hubs for businesses.

Lviv, Ivano-Frankivsk, Zakarpattia, Ternopil and Chernivtsi regions accounted for more than 30% of loan volume in 2023–2024 (Oschadbank, 2024). The regional distribution of 5-7-9 loans for 2022–2024 is summarized in Table 8.

Table 8. Regional Distribution

Region	% of 5-7-9 loans
Lviv	9–11%
Dnipropetrovsk	8–10%
Kyiv (city)	7–9%
Odesa	6–8%
Vinnytsia	5–7%
Poltava	5–6%
Kharkiv	4–6%
Ivano-Frankivsk	4–5%
Bukovyna (Chernivtsi)	3–4%

(Source: Oschadbank internal data, 2022 – 2025; FRP, 2024)

As shown in Table 8, western and central regions dominate the distribution of 5-7-9 loans, reflecting business relocation patterns during the war.

At the same time, Oschadbank reports that 20% of its MSME loans under 5-7-9 were issued in frontline regions, including Kharkiv, Dnipropetrovsk, Zaporizhzhia and Mykolaiv (Oschadbank, 2024; FRP, 2024).

Program Efficiency. The efficiency of the 5-7-9 program is assessed using reported quantitative indicators reported by FRP, including default rates, employment effects, and leverage ratios. These indicators are summarized in Table 9 (FRP, 2024).

Table 9. Efficiency KPIs of the 5-7-9 program (FRP 2024)

KPI	Value
Default rate	1.62%
Jobs created	103,345
Jobs preserved	948,685
Cost per 1 million UAH (jobs created)	2.30 jobs
Cost per 1 million UAH (jobs preserved)	21.15 jobs
Leverage effect	1 UAH subsidy → 8.16 UAH of credit

(Source: FRP Annual Report, 2024)

As shown in Table 9, the program demonstrates a low default rate and a substantial employment effect per unit of state support, indicating a high level of financial sustainability under wartime conditions.

2.4 State Portfolio Guarantees for MSMEs

Mechanism of Portfolio Guarantees. Portfolio guarantees are one of the most effective wartime financial instruments for supporting MSMEs in Ukraine. According to the Ministry of Finance (2024) and the Fund for Entrepreneurship Development (FRP, 2024), the guarantee mechanism allows banks to issue MSME loans with state-backed insurance covering up to 50% of the loan amount (Ministry of Finance of Ukraine, 2024; FRP, 2024).

The guarantee is not applied to a single loan but to a portfolio of loans. Banks receive a guarantee limit and allocate it to eligible MSME borrowers. When loans are repaid, banks may reuse the limit for new MSME borrowers. This creates a revolving structure that multiplies the effect of the state budget (FRP, 2024).

This mechanism significantly reduces credit risk for banks and enables them to issue loans to MSMEs that would otherwise be considered too risky in wartime. According to EBRD’s MSME Diagnostics Report (2024), portfolio guarantees reduced banks’ expected credit losses by 35–40% during 2022–2024 (EBRD, 2024).

At the same time, the guarantee coverage is limited to 50%, which means banks retain the remaining risk. This prevents moral hazard and encourages responsible lending (NBU, 2024). The key structural parameters of the portfolio guarantee mechanism implemented in 2022–2024 are summarized in Table 10.

Table 10. Structure of Portfolio Guarantee Program (2022–2024)

Component	Description
Guarantee coverage	50% of each MSME loan
Guarantee limit type	Portfolio-wide, revolving
Active participating banks	31
Loans issued under guarantees	32,619
Total guarantee-backed amount	103.8 bln UAH
Default payout share	~1–1.5% of guarantee fund

(Source: based on FRP & Ministry of Finance)

Banks Participating in the Guarantee Program. According to the Ministry of Finance (2024), 31 Ukrainian banks participated in the portfolio guarantee program in 2022–2024. Out of these:

- 30 banks used state guarantees;
- 4 banks used FRP guarantees;
- 6 banks used agricultural fund guarantees (under special wartime rules).

State banks dominate the program: PrivatBank (70% utilization of its limit) and Oschadbank (89% utilization) are the two largest lenders under guarantees (Ministry of Finance of Ukraine, 2024). Oschadbank’s internal reports show that during 2022–2024 it issued 2,719 guaranteed loans totaling 10.9 billion UAH, prioritizing frontline MSMEs (Oschadbank, 2024). Table 11 represents largest guaranteed loan lenders during 2022-2024.

Table 11. Leading Banks under Guarantee Scheme (2022–2024)

Bank	No. of guaranteed loans	Volume (UAH)	Utilization rate
PrivatBank	12,922	23.5 bln	70%

Oschadbank	2,719	10.9 bln	89%
Raiffeisen Bank	~1,300	~4.1 bln	n/a
PUMB	~1,100	~3.3 bln	n/a
KredoBank	~900	~2.4 bln	n/a

Source: FRP & Ministry of Finance, 2024; Oschadbank internal data, 2022 – 2025

Number of MSME Beneficiaries. From December 2020 to the end of 2024, Ukrainian MSMEs received 32,619 guaranteed loans with a total volume of 103.8 billion UAH (Ministry of Finance of Ukraine, 2024; FRP, 2024).

In 2023 alone, MSMEs received 13,658 loans worth 44.7 billion UAH (Ministry of Finance of Ukraine, 2023).

As of January 2024, 29 creditor banks were servicing 18,900 active guaranteed loans totaling nearly 67 billion UAH (Ministry of Finance of Ukraine, 2024).

FRP and EBRD data confirm that agriculture, trade and processing remain the top sectors: agriculture (6,876 loans; >35 billion UAH), trade (6,973 loans; 15.3 billion UAH) and processing (2,417 loans; 11.1 billion UAH) (FRP, 2024; EBRD, 2024). Table 12 represents guaranteed loans subtotaled by key national economy branches.

Table 12. Sectoral Breakdown of Guaranteed Loans

Sector	Loans issued	Total volume
Agriculture	6,876	>35 bln UAH
Trade	6,973	15.3 bln UAH
Processing industry	2,417	11.1 bln UAH
Logistics	1,210	4.8 bln UAH
Manufacturing	1,040	4.1 bln UAH

Source: FRP, 2024; EBRD, 2024

2.5 Donor Programs Supporting MSMEs (2022–2024)

EU4Business (European Union) is the largest donor-funded MSME support initiative in Eastern Europe. According to the EU4Business Country Report for Ukraine (2023), the program supported 25,500 MSMEs in 2022, generating €1.7 billion in additional revenue and 24,000 new jobs

(EU4Business, 2023). These results make EU4Business the most influential donor program in Ukraine’s MSME ecosystem. Major impacts of EU4Business are summarized in Table 13 below.

Table 13. EU4Business Impact in Ukraine (2022–2024)

Indicator	Value
MSMEs supported	25,500
Jobs created	24,000
Additional revenue	€1.7 billion
Grants disbursed	€8–10 million/year
Export program	1,500 MSMEs

Source: based on EU4Business Country Report 2023, official PDF

EU4Business operates through grants, consulting, export support, blended finance tools, and cooperation with Ukrainian banks and IFIs.

In 2023–2024, EU4Business expanded its support to relocation, business resilience, digitalization, and female entrepreneurship. Notable initiatives include:

- “EU4Business: SME Recovery, Competitiveness and Internationalisation” – €30 million blended package;
- “Ready4EU Export Programme” – supporting 1,500 export-oriented MSMEs;
- “Grants for 100 MSMEs” – 100 grants of €10,000 each in 2023 (EU4Business, 2023).

EU4Business works closely with EBRD, GIZ, Oschadbank, and Ukrainian government programs, often complementing the 5-7-9 loans with grant components (“additionality effect”).

USAID (CEP, AGRO, AGRI-Ukraine) had been one of the most active donors supporting Ukrainian MSMEs during wartime. Its programs combine grants, technical assistance, and supply chain support.

The Competitive Economy Program (CEP) (2018–2025) had a total budget of \$170 million and supported MSMEs with grants, export readiness, business modernization, and investment attraction (USAID, 2023).

CEP had provided over \$60 million in grants to Ukrainian MSMEs since 2022 (USAID, 2023).

The AGRO program focused on small farmers and rural MSMEs. According to USAID (2023), the program supported over 40,000 farmers with grants, seeds, greenhouses, machinery, and irrigation systems.

The AGRI-Ukraine initiative, launched after the invasion, has mobilized more than \$350 million to stabilize grain exports, logistics and processing capacity (USAID, 2024). USAID’s major programs are summarized in Table 14 below.

Table 14. USAID Support for MSMEs (2022–2024)

Program	Funding	MSMEs Supported	Notes
CEP	\$170 million	10,000+ MSMEs	Grants, consulting, export readiness
AGRO	\$250 million	40,000 farmers	Equipment, seeds, infrastructure
AGRI-Ukraine	\$350+ million	National-level	Grain hubs, logistics, processors
Loan guarantees	\$60 million	500–700 MSMEs	Risk-sharing for banks

EBRD is one of the key international financial institutions supporting Ukrainian MSMEs during the war. Since 2022, the EBRD has invested more than €6.2 billion in Ukraine, with a strong focus on private sector resilience, infrastructure and energy (EBRD, 2025). (Reuters)

For MSMEs, EBRD mainly uses portfolio risk-sharing facilities (PRS), credit lines via partner banks, and advisory programs. These instruments are often backed by EU guarantees under the Ukraine Investment Framework (UIF), which partly covers the EBRD’s first-loss risk on MSME sub-loans (EBRD, 2024; EU4Business, 2024).

In 2024, EBRD announced several major PRS facilities: a €100 million risk-sharing facility for Raiffeisen Bank Aval and a €690 million package of PRS facilities with PrivatBank, Ukrgasbank, Kredobank and Bank Lviv (EBRD, 2024). (EBPP)

Another facility of €200 million was provided to OTP Bank Ukraine, enabling new lending to private Ukrainian businesses, mostly MSMEs (EBRD & EU Delegation to Ukraine, 2024). (EEAS)

In addition to these banks, Oschadbank is officially included in the EBRD’s risk-sharing perimeter. In April 2024, the EBRD approved a €50 million unfunded risk-sharing guarantee for Oschadbank, enabling up to €200 million of new MSME lending under a 50% risk-coverage structure (EBRD, 2024).

Combined with EU first-loss guarantees, these PRS facilities are expected to support up to €850 million of new MSME loans by 2026 (EBRD, 2024).

EBRD also provides advisory services helping MSMEs to improve corporate governance, financial management, marketing and export readiness (EBRD, 2024). This soft component increases the

impact of credit lines and guarantees. Table 15 represents comparison of various instruments usage by major banks in Ukraine.

Table 15. EBRD MSME Risk-Sharing Facilities in Ukraine (2022–2024)

Facility	Partner banks	Amount	MSME lending enabled
PRS – Raiffeisen Bank Ukraine	Raiffeisen Bank	€100m	€100m MSME loans
PRS package (multi-bank)	PrivatBank, Ukrgasbank, KredoBank, Bank Lviv	€690m	Several hundred million EUR
PRS – OTP Bank Ukraine	OTP Bank	€200m	€200m MSME loans
PRS – Oschadbank	Oschadbank	€50m guarantee - €200m MSME lending	Up to €200m new MSME loans
Energy Security Support Facility (ESSF)	Oschadbank + EBRD	Up to €100m	Energy-resilience MSME finance
Advisory/Capacity-building	Oschadbank, Raiffeisen, Bank Lviv	Technical cooperation	Portfolio quality & risk management

Source: EBRD, 2024; EU Delegation, 2024; Oschadbank internal data, 2022 – 2025

German development cooperation agency GIZ plays a key role in energy resilience and green transition for Ukrainian MSMEs. Its projects are financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and SECO (Switzerland) (GIZ, 2024). (giz.de)

One of the most relevant projects for MSMEs is the “Support for Energy Resilience of Micro and Small Enterprises in Ukraine” program. It is implemented via FRP and partner banks, and provides small grants for investments in energy efficiency and renewable energy (BDF/FRP, 2023).

Under Component I of this program, micro-entrepreneurs can receive grants up to €10,000 in hryvnia equivalent to finance “energy resilience investments” (solar, storage, efficient equipment) (BDF, 2023).

Oschadbank is one of the key banks implementing GIZ-related energy programs. According to Oschadbank’s internal presentations, more than 1.5 billion UAH of IFI grants, including GIZ and EU funds, were channeled to MSMEs via Oschadbank in 2022–2024 (Oschadbank, 2024). Table 16 is a detailed example of one of the program in Oshchadbank.

Table 16. GIZ-Linked MSME Support Instruments

Instrument	Type	Typical grant size	Channel
Support for Energy Resilience of Micro and Small Enterprises	Grants for EE/RE investments	Up to €10,000	FRP + partner banks
Green energy & climate projects	TA + investment windows	Project-based	Through IFIs and banks
MSME support via Oschadbank	Grants blended with loans	Up to 20–30% of project cost	Oschadbank

Source: Oschadbank internal data, 2022 – 2025; GIZ; FRP

The German state development bank KfW directly supports the Ukrainian MSME ecosystem, primarily via the 5-7-9 program and MSME credit lines.

On 14 December 2023, Ukraine received a €50 million grant from KfW to refinance interest compensation costs under the state program “Affordable Loans 5-7-9%” (Ministry of Finance of Ukraine, 2023).

This grant reimburses the Ukrainian budget for a significant part of the interest subsidy, enabling the government to keep concessional rates (0–9%) for MSMEs during the war without cutting the program (Ministry of Finance of Ukraine, 2023).

Earlier KfW credit lines and microfinance projects (pre-war) also formed the backbone of FRP’s microcredit and priority sector lending schemes (FRP, 2024). Table 17 represents the impact of KfW on MSME.

Table 17. KfW Support to MSME Finance in Ukraine

Instrument	Amount	Role
Grant to refinance 5-7-9%	€50 million	Covers state interest compensation costs for MSME loans
MSME & microcredit lines via FRP	€80–100 million (cumulative)	Finance FRP microfinance & priority lending
Co-operation under SME Resilience Alliance	n/a	Policy & framework for SME recovery

Source: FRP & Ministry of Finance, 2024

Table 18 summarizes key donor and IFI MSME support programs in scale over the 2022-2024.

Table 18. Overview of Key Donor MSME Support Programs

Donor / IFI	Main instruments	Scale (2022–2024)	Link to state/FRP programs
EU4Business (EU)	Grants, TA, blended finance, export support	25,500 MSMEs; €1.7 bn extra revenue; 24,000 jobs	Complements FRP and bank loans with grants and advisory
USAID	Grants (CEP, AGRO, AGRI-Ukraine), guarantees	\$170m CEP; \$350m+ AGRI-Ukraine; \$60m guarantees	De-risks bank lending; supports agribusiness & exports
EBRD	PRS guarantees, credit lines, advisory	€6.2bn total investment; up to €850m MSME loans via PRS	Works through FRP partner banks; risk-sharing for MSME portfolios
GIZ	Energy resilience grants, TA	Grants up to €10k per micro-enterprise	Implemented via FRP & banks (incl. Oschadbank)
KfW	Grants & lines for 5-7-9 and MSME lending	€50m grant for 5-7-9; long-term MSME lines	Supports interest compensation & FRP program

Source: EU4Business Country Report 2023, FRP & Ministry of Finance, 2024

2.6 Comparative Analysis of Programs

Narrative Comparison. The Ukrainian MSME support system in 2022–2024 can be viewed as a portfolio of complementary instruments rather than one single program. State, donor and hybrid programs differ in objectives, scale, targeting and costs, but together they form a coherent ecosystem.

State programs (5-7-9, portfolio guarantees, leasing, factoring) provide scale and broad coverage. More than 104,000 loans under 5-7-9 and 32,619 guaranteed loans created or preserved over 1 million jobs (FRP, 2024; Ministry of Finance of Ukraine, 2024).

However, these programs are fiscally expensive: the state budget covers interest compensation and potential guarantee payouts. This is partially alleviated by donor contributions such as the €50m KfW grant (Ministry of Finance, 2023).

Donor programs (EU4Business, USAID, EBRD, GIZ, KfW) tend to be smaller in volume but more targeted and performance-based. For example, EU4Business reports that its support to 25,500 firms generated €1.7 billion in additional revenue and 24,000 new jobs (EU4Business, 2023).

Hybrid programs (FRP + IFIs + banks) show high financial leverage. EBRD's PRS facilities backed by EU guarantees are expected to unlock about €850m in MSME lending by 2026 from a much smaller first-loss guarantee envelope (EBRD, 2024).

In terms of efficiency vs cost, donor and hybrid programs usually deliver more impact per euro of public money, while state programs deliver more impact per number of enterprises supported.

In terms of scale vs coverage, state programs (especially 5-7-9) cover almost all regions and sectors, while donor programs often focus on specific target groups: exporters, farmers, women entrepreneurs, relocated firms, etc. (CES, 2024; EU4Business, 2023; USAID, 2023).

An illustrative summary of key programs, their costs and efficiency, summarized in Table 19 below.

Table 19. Efficiency vs Cost (Illustrative KPI Matrix)

Program type	Program	Main KPI	Cost characteristics	Efficiency per 1m UAH/EUR of public support
State – interest subsidy	5-7-9 (FRP)	103,345 jobs created; 948,685 jobs preserved	High budget cost for interest compensation; partly refinanced by KfW	~2.3 new jobs and 21.1 preserved jobs per 1m UAH of subsidy
State – portfolio guarantees	State guarantee scheme	32,619 loans; 103.8 bln UAH loans	Budget exposure limited to 50% of loan; payouts ~1–1.5% of fund	High leverage: 1 UAH guarantee → ~2 UAH loan; low default payouts
Donor – EU grants	EU4Business	24,000 jobs and €1.7bn extra revenue	Cost fully borne by EU budget; small share of total market	High impact per euro, but smaller absolute scale
Donor – USAID grants	CEP, AGRO	60m+ USD grants to MSMEs	Grant-based, targeted; no repayment	High development impact; focused sectors

Hybrid – EBRD PRS + EU guarantee	PRS facilities	Up to €850m MSME loans backed by €140m first-loss guarantee	High leverage ($\approx 6:1$); risk shared between EU, EBRD & banks	Very high efficiency per euro of public risk capital
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Table 20 represents a summary of coverage and sector focus by various MSME support programs.

Table 20. Scale vs Coverage

Program	Approx. number of MSMEs supported	Geographic coverage	Sector focus
5-7-9	104,456 loans	Nationwide (all oblasts)	Broad, with emphasis on agriculture & manufacturing
Portfolio guarantees	32,619 loans	Nationwide	Agriculture, trade, processing
FRP Leasing & Factoring	~3,000 MSMEs	Nationwide	Agriculture, transport, logistics
EU4Business	25,500 MSMEs (2022)	Nationwide, stronger in big regions	Export-oriented SMEs, innovators
USAID CEP / AGRO / AGRI	10,000+ MSMEs; 40,000 farmers	Nationwide; strong rural coverage	Agribusiness, rural MSMEs
EBRD PRS	Hundreds to thousands MSMEs (via banks)	Nationwide via large banks	Critical industries, agribusiness
GIZ energy resilience	Thousands of micro/small firms	Nationwide; focus on energy-vulnerable regions	Energy resilience, EE/RE

Synthesis. Overall, Ukrainian MSME support programs in 2022–2024 form a multi-layered system where state, donor and hybrid tools each play a specific role. State programs provide the backbone of credit support; donor programs supply targeted grants, TA and risk-sharing; hybrid tools connect the two and maximize leverage and resilience.

For the purposes of this thesis, the combination of FRP programs (5-7-9, guarantees, leasing, factoring) with donor-backed schemes (EU, USAID, EBRD, GIZ, KfW) can be interpreted as a de facto MSME recovery architecture that will shape Ukraine's post-war reconstruction.

State programs play a key role in ensuring nationwide coverage and large outreach. Instruments such as the 5-7-9 program, portfolio guarantees, leasing, and factoring reach tens of thousands of enterprises across all regions and sectors, with a strong focus on agriculture, manufacturing, and trade. Their main strength lies in scale and accessibility. However, this broad reach comes at a high fiscal cost, as the state budget must finance interest subsidies and bear potential guarantee losses, even though donor co-financing partly reduces this burden.

Donor-funded programs are smaller in volume but more focused in design. Programs such as EU4Business, USAID initiatives, EBRD facilities, and GIZ projects concentrate on specific target groups, including exporters, agribusinesses, innovators, and energy-vulnerable firms. These programs are often performance-based and show high efficiency, generating significant revenue growth, job creation, or resilience effects per euro of public funding.

Hybrid programs that combine state institutions, international financial institutions, and commercial banks demonstrate particularly strong leverage effects. By using guarantees and risk-sharing mechanisms, they mobilize large volumes of private lending with relatively limited public resources. This makes them financially efficient and attractive for scaling MSME finance in the medium term.

In summary, state programs provide broad access and stability, donor programs deliver targeted and cost-efficient impact, and hybrid programs maximize financial leverage. Their combined use creates a complementary ecosystem that supports Ukrainian MSMEs across regions, sectors, and stages of development.

CHAPTER 3. INTERNATIONAL EXPERIENCE (KOREA, ISRAEL, JAPAN, MARSHALL PLAN)

3.1 South Korea: SME Recovery and Structural Transformation

South Korea is one of the most-cited examples of a successful transformation from a low-income, war-damaged economy into an advanced industrial nation. The early post-war years were shaped by macroeconomic instability, shortages of capital, and dependence on foreign aid. These conditions limited business activity and slowed private-sector development. (SaKong & Koh, 2010)

In the 1960s, South Korea introduced a coordinated development model combining macroeconomic planning, export promotion, industrial targeting, and institution-building. (Heo et al., 2008). Under this model, small and medium enterprises (SMEs) were recognized not only as suppliers, but also as an essential part of industrial modernization, employment creation, and regional economic diversification. The government integrated SMEs into industrial clusters, export supply chains, and subcontracting networks of large chaebol. (World Bank & KDI, 2011). This integration allowed SMEs to expand production, upgrade technology and increase their contribution to national industrial output.

At the same time, Korea built specialized financial institutions and guarantee schemes to correct credit-market failures that limited SME growth. (Jones & Kim, 2014). As a result, Korea's SME sector played a central role in the structural shift from labour-intensive to technology-intensive manufacturing during the 1970s–1990s. The following subsections examine how SME-related policies were designed and implemented across different phases of Korea's development trajectory.

Wartime and Post-War SME Policy. After the Korean War, SME development in South Korea was constrained primarily by the destruction of productive capacity and limited access to finance, as commercial banks avoided lending to SMEs due to high risk and insufficient collateral (Lee, 2001; Nugent & Yhee, 2001). The absence of SME-oriented credit markets represented a major structural barrier to post-war recovery.

In response, the government introduced a set of targeted policy instruments between the late 1950s and early 1960s aimed at stabilizing SME activity, restoring production capacity and expanding access to credit. Postwar Reconstruction Credit (1958–1961) provided concessional loans to damaged workshops, textile producers and small manufacturers, financed largely through U.S. aid (SaKong & Koh, 2010). The SME Promotion Order (1959) formally embedded SME support into national development planning by requiring ministries to incorporate SME components in their programs. The

establishment of the Industrial Bank of Korea (IBK) in 1961 created a dedicated policy bank for SMEs, providing long-term and investment-oriented finance, with effectiveness monitored through loan volumes, the share of long-term credit and enterprise coverage (Jones & Kim, 2014). Additional measures included export-linked incentives for SMEs engaged in export production, such as tax benefits, preferential import licenses and subsidized foreign-exchange access, as well as early SME credit quotas introduced in 1964, which required banks to allocate a minimum share of lending to SMEs as an initial attempt to correct structural under-lending.

Collectively, these instruments established the institutional foundation of Korea's SME policy and stabilized the sector during the transition to state-led industrialization.

From the mid-1960s onward, industrial policy became the dominant instrument for accelerating economic growth and modernizing production structures, with significant direct and indirect effects on SME development. The Heavy and Chemical Industry (HCI) Drive, launched in 1973, prioritized large-scale industrial sectors through subsidized finance, preferential foreign exchange, tax incentives and state-backed capital (Noland, 2011). These policies channeled resources primarily to large chaebol, leading to the crowding-out of SMEs from long-term investment credit (Jones & Kim, 2014). As shown in Table 21, SME shares in manufacturing value added and employment declined sharply during the 1970s, reflecting the adverse distributional effects of large-scale industrial targeting.

Table 21. SME share in employment & manufacturing value added (south Korea)

Year	SME share in employment (%)	SME share in manufacturing value added (%)
1960	67.7	57.0
1975	45.7	31.7
1997	69.3	46.5

Source: Nugent & Yhee (2001).

After the HCI period, the government shifted toward policies that strengthened SME participation in industrial networks.

Cluster development programs (1980s–1990s) encouraged SMEs to join regional production networks, especially in machinery, textiles, auto parts and electronics. (KDI, 2010)

The government also promoted subcontracting networks by linking SMEs to chaebol through supply chain agreements, quality standards (KS-system) and shared technology centers.

These policies resulted in improved SME capabilities in process upgrading, precision machining, and component manufacturing.

Localization policy (late 1970s–1980s) required domestic production of components that were previously imported. SMEs became major suppliers in machinery and electronics clusters.

Technology diffusion programs, such as shared-use industrial labs, helped SMEs adopt modern machinery and production standards.

In the early 1990s, Korea introduced SME innovation centers, which offered engineering consulting, prototyping services and support for process automation.

Overall, Korea used industrial policy not only to support large firms, but also to build competitive SME ecosystems integrated into national supply chains.

Evaluation of Effective and Ineffective SME Support Instruments. South Korea’s SME support system combined financial instruments, industrial policies and institutional reforms. The effectiveness of these measures varied significantly across different periods and tools.

This section evaluates the main SME support instruments using evidence from academic studies, KDI, OECD and the World Bank.

Table 22 below summarizes the effectiveness of the main SME policy tools.

Table 22. Effectiveness Matrix of SME Instruments (South Korea)

Instrument	KPI used in evaluation	Measured impact	Evidence
KODIT guarantees	Survival rate, investment	Survival +5–12%; higher investment	Heshmati et al. (2008); Ji & Ha (2021)
IBK & SME policy banks	SME loan volume, long-term loans	↑ access to long-term credit	Jones & Kim (2014)
Technology-based guarantees (KOTEC)	Innovation investment	Strong impact on tech SMEs	KOTEC 2010
SME cluster programmes	Productivity, exports	Higher productivity in clusters	KDI (2010)
SME–chaebol subcontracting	Output stability	Strong integration effects	World Bank & KDI (2011)
Policy loans	Credit volume	Increased credit but mixed quality	Ji & Ha (2021)
Credit quotas	Credit allocation	↑ volume, ↓ credit quality	Ji & Ha (2021)
HCI (1973–1981)	SME VA share, employment	Negative: SMEs crowded out	Noland (2011)

The most effective instruments were targeted and market-correcting tools, especially public guarantees and technology-based credit assessment.

The least effective tools were general subsidies and large-scale industrial policies that favored chaebol and reduced the role of SMEs.

To illustrate the effect of industrial policy phases on SMEs, Table 23 shows changes in SME value-added (VA) and employment shares.

Table 23. SME VA & Employment Dynamics Across Policy Phases

Year	SME share in employment (%)	SME share in VA (%)	Policy Phase
1960	67.7	57.0	Early SME policy formation
1975	45.7	31.7	HCI crowding-out period
1997	69.3	46.5	SME-focused reforms

Source: Nugent & Yhee (2001)

The table confirms that during the HCI period, SME contributions fell sharply, demonstrating that large-scale industrial targeting distorted SME development.

After the expansion of SME finance instruments in the 1980s and 1990s, both indicators recovered significantly.

To support visual analysis, Figure 1 provides the full dataset for building a graph of SME VA and employment trends.

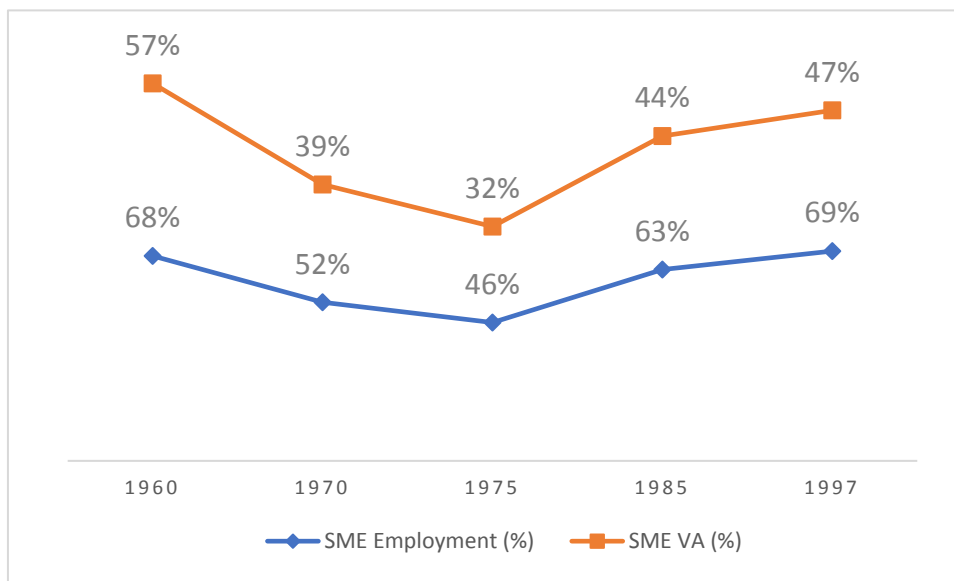


Figure 1. SME Employment and VA Trends

The trend shows a U-shaped recovery: SMEs lost their position in the 1970s but regained strength once SME finance and cluster policies expanded. This confirms that financial and institutional SME support instruments had a stronger long-term impact than large-scale industrial targeting.

Most effective tools: credit guarantees (KODIT), SME clusters, technology-finance (KOTEC), and IBK long-term lending are reflected in Figure 2 below.

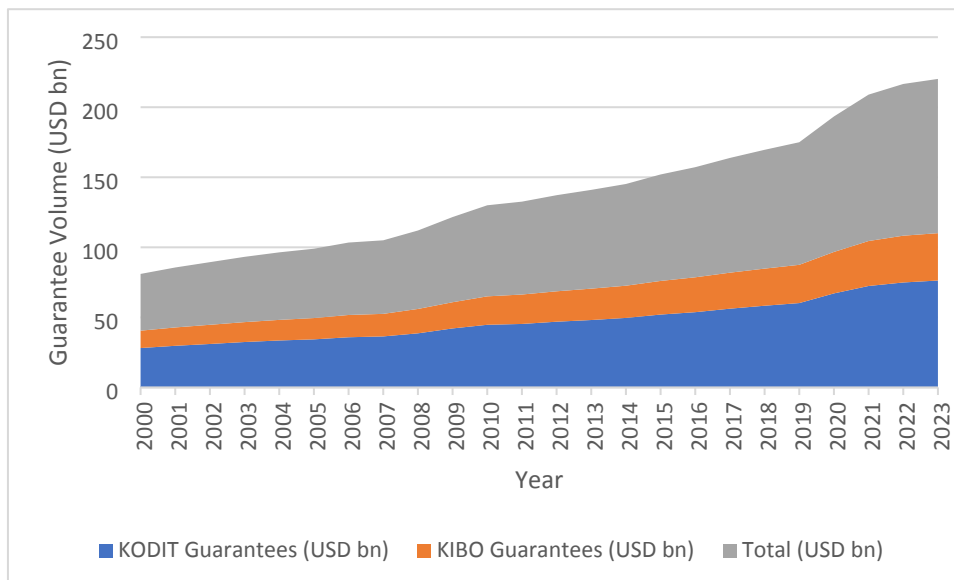


Figure 2. Growth of SME Credit Guarantees (KODIT + KIBO)

Least effective tools: HCI policies favoring chaebol, general subsidies without performance criteria, and poorly targeted policy loans. Overall, South Korea’s experience shows that SME-oriented financial institutions and guarantee schemes form the core of successful SME development models.

3.2 Israel SME support

Innovation ecosystem. Israel is widely known as a “Start-Up Nation” with a dynamic innovation ecosystem supporting small and medium-sized enterprises (SMEs). The country consistently ranks among global leaders in R&D investment, spending about 6.0% of GDP on research and development as of 2022 – the highest share in the world (NSF, 2025). This robust R&D base is driven largely by the business sector and has fostered a high-tech oriented economy. Venture capital availability is also exceptional: Israel has the largest venture capital investment relative to GDP among OECD countries, with a strong focus on seed and early-stage financing (OECD, 2016). Such abundant risk capital and R&D activity underpin a vibrant start-up scene and continuous innovation.

The Israeli innovation ecosystem is characterized by close collaboration between government, academia, and industry to nurture new ventures. The Israel Innovation Authority (IIA), a government agency, oversees dozens of programs to bolster technological innovation and R&D. Notably, the IIA

operates a network of 18 technological incubators (public–private partnerships) that offer technical expertise, seed funding, and networking opportunities to high-tech start-ups (OECD, 2016). These incubators—initially established in the 1990s under the Chief Scientist’s Office and later privatized—have been crucial in commercializing innovations and supporting entrepreneurs, especially in cutting-edge fields. Venture capital funds, both domestic and international, complement this ecosystem; by the mid-2010s Israel hosted around 70 VC funds, and venture capital became “a major and dynamic component of the high-technology entrepreneurship success story of Israel” (OECD, 2016). Government initiatives such as the famous Yozma program in the 1990s helped jumpstart this sector by incentivizing private VC investment. Overall, Israel’s innovation ecosystem provides SMEs with unparalleled access to knowledge, finance, and markets, fueling their growth.

SME agencies. The institutional framework for SME support in Israel centers on dedicated agencies and programs. The Small and Medium Business Agency (SMBA) is the government’s core body for SME development, established in 2010 under the Ministry of Economy and Industry. The SMBA’s creation “has strengthened Israel’s SME and entrepreneurship policy” by consolidating and upgrading support services (OECD, 2016). The agency has four main functions: providing business development services to SMEs (primarily via the MAOF network of regional one-stop assistance centers), administering the national loan guarantee program, reviewing new legislation for SME impacts, and coordinating SME-related policy across government (OECD, 2016). Through the MAOF centers, entrepreneurs and small business owners can access training, consulting, and mentoring in locations throughout the country. The SMBA also operates funding assistance programs – notably the State-guaranteed loan fund and various grant schemes – to improve SMEs’ access to finance. Importantly, since its inception the agency has expanded the scale and reach of support: it transformed the patchwork of local support offices into a high-quality national network, and it “supported the scale up and restructuring of the national loan guarantee program” (OECD, 2016).

Alongside the SMBA, several other public bodies contribute to SME support. The Israel Innovation Authority, mentioned above, focuses on R&D and innovative start-ups, offering grants and incubation programs that benefit high-tech SMEs. For instance, SMEs developing new technologies can receive R&D grants or join incubators co-funded by the IIA (OECD, 2016). Another specialized entity is the Authority for the Economic Development of the Minority Sectors (known as MEDA), which operates under the Ministry for Social Equality. MEDA implements initiatives to increase the entrepreneurship and growth of Arab, Druze, and other minority-owned businesses – for example, by running tailored business centers and training programs in minority communities. Export-oriented SMEs,

meanwhile, are supported by the Foreign Trade Administration and the Israel Export Institute, which help firms access international markets. Additionally, the Ministry of Immigrant Absorption offers programs for new immigrant entrepreneurs (e.g. an “Independent Immigrant” fund). This landscape of multiple agencies means SME support is multi-faceted, but it also requires coordination. The SMBA plays a role in steering and aligning these efforts – consulting with businesses, liaising with other ministries, and advocating for SME-friendly policies. However, OECD assessments have noted that Israel lacks an integrated national SME strategy and formal coordination mechanisms. Unlike many OECD countries, Israel as of 2016 had no government-wide SME policy document and no standing inter-ministerial committee on SMEs, which limits the strategic alignment of the various programs (OECD, 2016). The SMBA’s status as a department within a ministry (rather than a fully empowered agency) and its relatively small staff and budget have somewhat constrained its authority to convene other ministries and drive a unified agenda. Recent recommendations urge developing a comprehensive SME strategy and strengthening the SMBA’s mandate in order to improve policy coherence across the innovation, finance, and business development spheres (OECD, 2016).

Loan guarantee funds. A pillar of Israel’s SME support is its loan guarantee program, which facilitates bank credit to small businesses by sharing the lending risk. The Government Loan Guarantee Scheme – managed jointly by the SMBA and Ministry of Finance – is channeled through the Small and Medium Business Fund (SMBF). In 2012, Israel overhauled and expanded this system by merging three pre-existing guarantee funds into the unified SMBF and boosting its capitalization (OECD, 2016). This reform streamlined application procedures for firms and enabled greater lending volume. Under the SMBF, participating banks extend loans to eligible SMEs, and the government guarantees a significant portion of each loan’s value – up to 70% for existing businesses and 85% for new start-ups (OECD, 2016). In practice, the state places a reserve (around 9% of the loan amount in recent years) with the banks to cover potential defaults, leveraging public funds roughly 10-fold in credit supply. The program thus encourages banks to lend to SMEs that might otherwise be deemed too risky.

The loan guarantee fund has grown into a major channel for SME financing as shown in Figure 3. In its first four-year phase (2012–2016), the revamped SMBF supported over ₪6.4 billion in SME loans, far exceeding prior programs. A second phase launched in 2016 aimed to facilitate another ₪6.6 billion in credit over the subsequent period (OECD, 2016). Figure 3 illustrates the rapid expansion of annual state-guaranteed lending after the reform: from under ₪200 million in 2007–2008 to over ₪2 billion by 2013. This scaling-up reflects strong demand from small businesses and the government’s commitment to easing credit constraints. According to the OECD, the guarantee scheme “plays a

fundamental role in improving SME access to bank loans in Israel” (OECD, 2016). Notably, the program was adjusted in 2016 to extend maximum loan terms (up to 12 years for industrial investments) and to slightly increase the leverage of the fund, aiming for greater sustainability without reducing its attractiveness to lenders and borrowers.

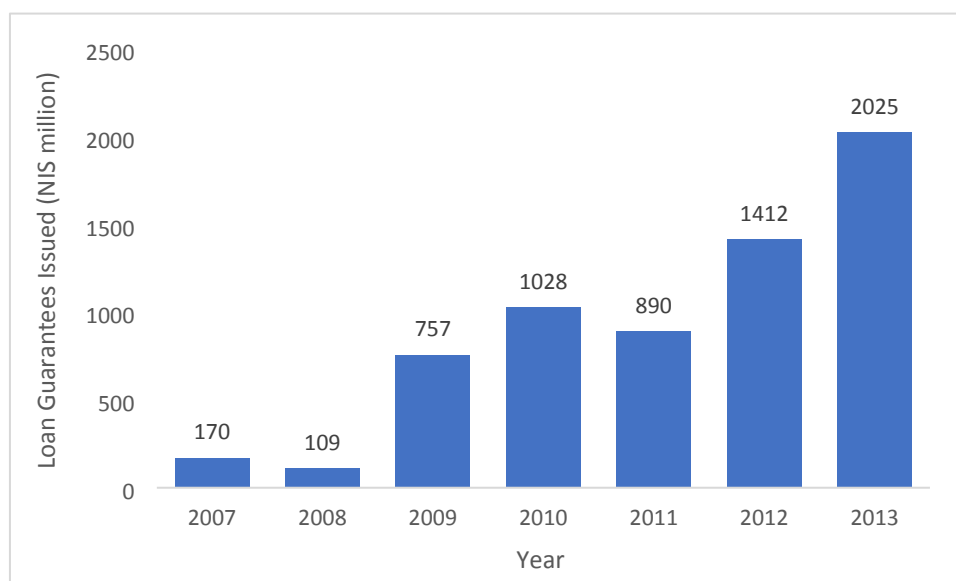


Figure 3. Annual Government-Guaranteed SME Loans in Israel (2007–2013), in millions of NIS.

This scaling-up reflects strong demand from small businesses and the government’s commitment to easing credit constraints. According to the OECD, the guarantee scheme “plays a fundamental role in improving SME access to bank loans in Israel” (OECD, 2016). Notably, the program was adjusted in 2016 to extend maximum loan terms (up to 12 years for industrial investments) and to slightly increase the leverage of the fund, aiming for greater sustainability without reducing its attractiveness to lenders and borrowers.

The impact of the credit guarantee scheme has been significant, though not without challenges. It has enabled thousands of SMEs to obtain loans that fuel business expansion and survival. An independent evaluation found that roughly 53% of the loans granted under the program are “additional,” meaning the firms would likely not have secured a comparable loan without the state guarantee (Rubin & Ben-Aharon, 2021) as seen in Table 24 below. In fact, about one-third of guarantee beneficiaries obtained financing that was fully unavailable from banks otherwise – a clear indication that the fund addresses a market gap (Rubin & Ben-Aharon, 2021). The remaining guaranteed borrowers received better interest rates or terms thanks to the program, improving their financial conditions. These findings underscore the macroeconomic value of the scheme: by overcoming credit market failures, it enables

more investment, entrepreneurship, and job retention in the SME sector. On the other hand, the program's strict screening process has meant a relatively high rejection rate – around 45% of loan applications are not approved. The OECD noted that this rejection rate is high despite default levels being in line with international norms, suggesting there may be room to cautiously widen access (OECD, 2016). Balancing broader credit reach with prudent risk management remains an ongoing policy consideration.

Table 24 Impact of Israel's SME Credit Grantees

Indicator	Value
Additionality of guaranteed loans (%)	53%
Firms receiving financing unavailable otherwise (%)	33%
Loan applications rejected (%)	45%
Default rate vs international average	In line with international norms
Improved interest/terms among accepted (%)	≈47% (inferred from context)

Source: Rubin & Ben-Aharon, 2021; OECD, 2016

Macroeconomic impact. Small and medium enterprises are vital to Israel's macroeconomy, and the support structures described above have broad economic implications. SMEs make up 99.8% of all Israeli businesses and account for roughly 69% of business sector employment and 62% of value added (OECD, 2016). They are also responsible for about 42% of the nation's exports, a relatively high share by international standard. This means that the performance of the SME sector strongly influences overall GDP growth, job creation, and trade. Israel's booming high-tech industries – largely composed of innovative SMEs – have been a major driver of GDP per capita gains and export earnings over the past decade. By nurturing start-ups and scaling SMEs, the country has transformed into a tech-based economy with high-income status. Indeed, Israel's GDP per capita rose above \$50,000 by the mid-2020s, reflecting its innovation-driven prosperity (Startup Nation Central, 2024). At the same time, traditional small businesses (e.g. in manufacturing, construction, local services) remain essential for employment across communities and regions. Government support programs for SMEs help stabilize these businesses, thereby sustaining jobs and incomes beyond the high-tech enclave.

SME support is not only a microeconomic policy but also a tool for inclusive and sustainable growth. By improving access to credit, training, and innovation for small firms, the government aims to boost productivity and competitiveness across the economy. There is evidence that Israel's SME sector has a dual nature: while tech-oriented SMEs are highly productive and innovative, many smaller

traditional businesses lag behind. In particular, medium-sized manufacturing enterprises (20–99 employees) exhibit relatively weak productivity compared to large firms – a gap larger in Israel than in most OECD countries (OECD, 2016). This productivity gap is not observed to the same extent in services, and it is attributed partly to lower adoption of advanced technologies and R&D among manufacturing SMEs (oe.cd.org). As a result, one of Israel’s economic challenges is to diffuse the success of its high-tech clusters to the wider SME population. Policies are increasingly focused on helping traditional SMEs upgrade skills, invest in innovation, and integrate into global value chains (OECD, 2016). Reducing the productivity gap between small and large firms would “broaden the drivers of economic growth and help respond to...duality in the Israeli economy” (OECD, 2016). In line with this, recent government initiatives (for example, programs under MEDA and the Ministry of Economy) target support to underperforming SME segments such as minority-owned businesses and firms in peripheral regions. Strengthening these enterprises can increase employment in disadvantaged communities and ensure that the benefits of Israel’s innovation-led growth are widely shared. Overall, robust SME support has macroeconomic payoffs: it fosters entrepreneurship, diversifies the economic base, and builds resilience by not relying solely on a few large corporations.

3.3 Japan SME support

Postwar reconstruction. After World War II, Japan’s government made the revival of small and medium-sized enterprises (SMEs) a priority. In the late 1940s, the Allied Occupation authorities implemented anti-monopoly reforms to decentralize economic power. Notably, the 1947 Antimonopoly Act and the Law for Elimination of Excessive Concentration dismantled big conglomerates and encouraged independent businesses (Yoshimura & Kato, 2008). In this context, Japan established the Small and Medium Enterprise Agency (SMEA) in 1948 as an extra-ministerial bureau to foster sound development of SMEs and ensure fair business opportunities (Small and Medium Enterprise Agency [SMEA], n.d.-a; Uchikawa, 2008). Early postwar SME policy emphasized institution-building and self-help over large subsidies, partly because the U.S. General Headquarters (GHQ) was hesitant to permit big spending on SME aid (Organization for Small & Medium Enterprises and Regional Innovation [SMRJ], 2006; Uchikawa, 2008). Instead, the government focused on providing technical guidance and organizational support to help war-damaged small businesses recover.

By the early 1950s, Japan had introduced targeted financial tools to jump-start SME growth. A dedicated reconstruction finance institution was set up in 1947, and soon after the government established the People’s Finance Corporation in 1949 to offer small loans without collateral to micro-enterprises

(Uchikawa, 2008). In 1953, another public lender, the Japan Finance Corporation for Small Business (also known as JASME), was created to provide SMEs with long-term, fixed-rate funds that private banks found difficult to supply (Uchikawa, 2008). The semi-governmental Shoko Chukin Bank, originally founded in 1936, also expanded its role by 1951 to directly finance SME cooperatives and their members (SMRJ, 2006). These institutions helped remedy the postwar credit shortage and supplied the capital needed for industrial recovery (SMRJ, 2006; Uchikawa, 2008). At the same time, Japan revived and expanded its SME credit guarantee system. The government enacted a Small Business Credit Insurance Law in 1950 and set up Credit Guarantee Corporations in each prefecture by 1951. These local guarantee agencies underwrote bank loans to small firms, backed by a national credit insurance program (SMRJ, 2006). In 1953, the Credit Guarantee Corporation Law gave these agencies a formal public mandate (SMRJ, 2006). Together, these financial measures – public loan corporations and credit guarantees – provided crucial funding to restart factories and workshops in the postwar period (METI, 2016; SMRJ, 2006).

In addition to finance, the government supported SMEs through cooperative organizations and policy interventions. A new Small Business Cooperative Law of 1949 enabled small manufacturers and merchants to form cooperatives for joint purchasing, marketing, and mutual aid (SMRJ, 2006). These cooperatives helped fragmented small firms achieve economies of scale. When the postwar boom cooled and competition intensified, Japan introduced emergency measures to stabilize vulnerable sectors of the SME economy. For example, the 1952 Temporary Measures Law for SME Stabilization allowed authorities to curb excessive competition in designated industries, and in 1953 a permanent SME Stabilization Law was enacted to continue these protections (SMRJ, 2006). These laws aimed to prevent bankruptcies of smaller firms during recessions by coordinating production and prices in overcrowded markets (SMRJ, 2006). By the mid-1950s, Japan had built a comprehensive SME support framework. Financial aid (loans and credit guarantees), organizational support (cooperatives and chambers), and modernization guidance were all in place to facilitate the postwar reconstruction of industry on the back of a dynamic small-firm sector.

SME development agencies. Japan's postwar institutional setup for SME support has been sustained and refined over the decades. The central coordinating body is the Small and Medium Enterprise Agency (SMEA), which remains part of the Ministry of Economy, Trade and Industry. The SMEA is responsible for planning and implementing basic SME promotion measures, ranging from management improvement and technology advancement to ensuring fair transactions (Small and Medium Enterprise Agency [SMEA], n.d.-a; Small and Medium Enterprise Agency, n.d.-b). It serves as the hub

of policy, advising on laws and liaising with other ministries to keep SME interests on the agenda. The SMEA also oversees local support programs and produces an annual White Paper analyzing SME trends and challenges (Small and Medium Enterprise Agency, 2019). In addition to the SMEA, Japan established public organizations to provide hands-on assistance to SMEs. For example, a system of SME guidance centers and training institutes was developed, and in 1948 the government introduced an SME Diagnosis program certifying consultants to advise small businesses (Uchikawa, 2008). This created a nationwide cadre of licensed SME management consultants who offer free or subsidized advisory services on business planning, technology, and productivity. Such institutional infrastructure has helped professionalize the SME sector and diffuse best practices throughout the country.

A cornerstone of Japan's SME development strategy is its robust system of public and semi-public financial institutions dedicated to small businesses. Over time, several specialized lenders were consolidated under the Japan Finance Corporation (JFC), a government-affiliated institution. The JFC (established 2008) now encompasses the functions of earlier entities like the People's Finance Corp. and JASME, and it provides a wide range of financing programs for SMEs – including startup loans, business modernization loans, and emergency credit lines (Bank of Japan, 2012). These government-backed loans typically feature lower interest rates or unsecured terms that complement private bank lending. Another key player is the Shoko Chukin Bank, which historically served trade cooperatives and now operates as a hybrid public-private bank specializing in SME finance. Shoko Chukin offers commercial loans to small and medium firms and cooperative societies, and it remains partly government-owned to ensure a policy role in supporting smaller enterprises (SMRJ, 2006; Uchikawa, 2008). Alongside direct lending, Japan continues to maintain its extensive credit guarantee system to facilitate SME borrowing from private banks. Each prefecture has a Credit Guarantee Corporation that guarantees SME loans, covering a significant portion of any default risk (SMRJ, 2006; Yamori, 2015). These guarantees are in turn reinsured by the Japan Finance Corporation's credit insurance arm, creating a "credit supplementation system" that spreads risk between local, regional, and national levels (BIS, 2006; Japan Federation of Credit Guarantee Corporations, 2013). Thanks to this system, even SMEs with limited collateral can obtain bank financing, as over 1.1 million SME loans in Japan are supported by credit guarantees annually (National Federation of Credit Guarantee Corporations [NFCGC], 2020; Yamori, 2015). The strong network of public finance and guarantees has been credited with Japan's consistently high SME loan availability and comparatively low interest rates for small firms (Organisation for Economic Co-operation and Development [OECD], 2018).

Table 25 summarize the structure of SME finance in Japan, highlighting the central role of the credit guarantee system and the Japan Finance Corporation within a predominantly bank-based system of SME lending.

Table 25. Structure of SME finance in Japan (as of March 31, 2024)

Indicator	Value	Share of total
Total outstanding loans to SMEs & micro/small businesses	350.0 trillion yen	100%
Loans guaranteed by CGCs (outstanding guaranteed liabilities)	36.0 trillion yen	≈10.3%
Direct loans from JFC SME Unit (loan programs)	7.8 trillion yen	≈2.2%
Other SME loans by private financial institutions (without CGC guarantee, approx.)	306.2 trillion yen	≈87.5%
Total number of SMEs	3.36 million enterprises	100%
SMEs using Credit Guarantee System	1.49 million enterprises	45% of all SMEs

Japanese SMEs also benefit from a network of business associations and local support organizations. The Japan Chamber of Commerce and Industry (JCCI) and its regional chapters, established under the 1953 Chambers of Commerce Act, play a prominent role in SME development. These chambers – together with local Societies of Commerce and Industry in smaller towns – provide services such as business counseling, training workshops, and matchmaking for small companies. They act as intermediaries between government programs and the business community, helping to disseminate information on subsidies or new policies. For instance, during recent initiatives to boost SME productivity, the government has worked through chambers and regional banks to reach firms in need of support (World Economic Forum, 2025). Another important body is the Organization for Small & Medium Enterprises and Regional Innovation (SMRJ), a government-affiliated agency. SMRJ implements various SME support projects, including mentoring for new entrepreneurs, facilitating business succession for retiring owners, and promoting innovation clusters (SMRJ, 2006). It also manages grant programs and loan guarantee schemes in coordination with SMEA. Overall, Japan’s ecosystem of SME agencies – from the national SMEA down to local chambers – provides multi-layered assistance covering finance, skill development, technology adoption, and market access. This collaborative infrastructure has contributed to Japan’s high SME survival and density. As of 2016, the country had approximately 3.58 million SMEs, representing 99.7% of all enterprises and about 70% of

private-sector employment (Ministry of Economy, Trade and Industry [METI], 2016). Such statistics underscore the continued importance of SMEs and justify the extensive support network in place.

SME development agencies. Japan's SME policy has demonstrated remarkable continuity from the postwar era to the present, even as its focus has evolved with economic circumstances. In 1963, the government enacted the Small and Medium Enterprise Basic Law, which provided an enduring legal foundation for SME support. The 1963 Basic Law (often called the "Old Basic Law") viewed SMEs primarily as weaker players in a dualistic economy and sought to rectify the gap between small and large enterprises (Small and Medium Enterprise Agency, n.d.-b; Yoshimura & Kato, 2008). Policymakers at the time aimed to reduce disparities in productivity and wages; thus, SME policies in the 1960s concentrated on structural improvements and protections for small firms. For example, the government promoted SME modernization through subsidized equipment investment and technical assistance, and it addressed disadvantages like unfavorable subcontracting terms via regulation (Yoshimura & Kato, 2008; The Existence of SMEs in Japan, 2016). Over the next few decades, numerous measures were introduced under this framework: a 1966 law to ensure a portion of government procurement for SMEs, a 1970 law to prevent abuses in subcontracting relationships, and various tax relief and finance programs to bolster SME competitiveness (Yoshimura & Kato, 2008). This early period established SMEs as a permanent object of industrial policy.

By the 1980s–1990s, economic changes such as globalization and the rise of the information economy prompted Japan to adjust its SME policy approach. A major turning point came with the 1999 revision of the SME Basic Law. The "New Basic Law" of 1999 fundamentally shifted the policy philosophy: SMEs were no longer seen merely as entities to be protected, but rather as "the driving force behind a dynamic economy," as stated in the revised law's preamble (Small and Medium Enterprise Agency, n.d.-b; Nakagawa, 2012; Yoshimura & Kato, 2008). The updated law emphasized supporting the self-reliant growth and innovation of SMEs, rather than just correcting their weaknesses. In contrast to the old policy goal of narrowing the gap with large enterprises, the new goal was to develop and support the growth of a wide range of independent SMEs to enhance overall economic vitality (Nakagawa, 2012; Yoshimura & Kato, 2008). Key policy system changes included encouraging business startups, facilitating innovation, and improving the management base of SMEs (e.g. upgrading skills and technologies) (Nakagawa, 2012). This paradigm shift in 1999 recognized that fostering entrepreneurship and competitiveness among SMEs was crucial for Japan's long-term growth (Nakagawa, 2012). Following the new Basic Law, the government launched initiatives such as the "Startup Doubling Plan" in 2001 to stimulate new firm creation (Yasuda, 2009; NISTEP, 2006). It also relaxed regulatory barriers

(for instance, eliminating minimum capital requirements for new companies) and expanded credit support for innovative ventures. These steps marked a move from a protective stance to a more enabling, growth-oriented SME policy.

Importantly, Japan's core commitment to its SME sector has remained steady across economic cycles. Government support for SMEs proved crucial during difficult periods such as the burst of the economic bubble in the 1990s and the global financial crisis of 2008–2009. For instance, in the late 1990s the government temporarily expanded credit guarantees to almost 100% coverage to prevent a wave of SME bankruptcies (International Monetary Fund [IMF], 2000; OECD, 2012). SME policy has also addressed structural issues like an aging proprietor population and succession problems: recent programs provide mentoring and match-making to transfer viable small businesses to new owners (SMRJ, 2006; Nakagawa, 2012). Moreover, current strategies emphasize productivity improvement and globalization of SMEs. The government's SME Basic Plan, updated every few years, sets targets for innovation, IT adoption, and overseas expansion of smaller firms (METI, 2020; Small and Medium Enterprise Agency, 2019). Quantitative indicators highlight both the achievements and challenges of Japan's SME policy. On one hand, Japanese SMEs consistently contribute around 50–55% of GDP and employ about 70% of the workforce (METI, 2016; OECD, 2018), underscoring their indispensable role in the economy.

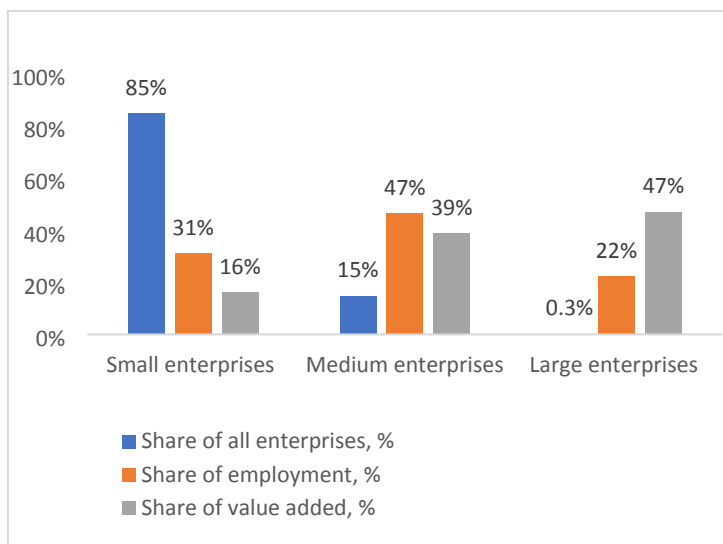


Figure 4. Contribution of SMEs to enterprises, employment and value added in Japan (2015–2016)

These aggregate shares are illustrated in Figure 4, which show that SMEs account for 99.7 per cent of all enterprises in Japan, almost 70 per cent of employment and more than half of value added.

On the other hand, entrepreneurship remains subdued – the startup rate is low and many new firms struggle to survive. Only about 42% of new SMEs survive beyond five years (Ogane, 2015),

according to data from Japan’s SME White Paper. This relatively modest survival rate, coupled with a declining number of total SMEs (a drop of roughly 1 million over two decades) (METI, 2016), has spurred the government to continue refining its SME policies. In summary, Japan’s long-term SME policy can be characterized by its continuity and adaptability: foundational institutions and laws have persisted since the 1960s, while specific programs have evolved to meet the changing needs of SMEs in each era. This blend of stability and innovation in policy has helped Japan’s SME sector remain a backbone of the economy through decades of rapid growth, stagnation, and renewal.

3.4 Marshall Plan Evaluation

Instrument Structure. The Marshall Plan – officially the European Recovery Program (ERP) – was a U.S.-funded instrument for post-WWII reconstruction of Western Europe (1948–1952). It provided about 13.3 billion U.S. dollars (around 130–150 billion in today’s terms) of aid to 16 European countries (Tarnoff, 2018). Aid was allocated roughly by country size and need: for example, the United Kingdom received about 26% of total funds, France 18%, and West Germany around 11% (Tarnoff, 2018; Ferguson, 2007). Rather than simple cash handouts, most assistance came as food, fuel, machinery, and other goods shipped from the United States (Tarnoff, 2018). Crucially, European governments paid for these U.S. supplies in local currency, and those payments were deposited into “counterpart funds”. The funds were then reinvested into each nation’s economy – often as loans for rebuilding industry and infrastructure (Tarnoff, 2018; KfW, n.d.-a).

As shown in Table 26, a large share of ERP resources went to a small number of core industrial economies, which later became centers of SME-based supply chains.

Table 26. Marshall Plan ERP aid by main recipient countries, 1948–1951

Country	ERP aid (US\$ bn, 1948–1951)	Share of total ERP (%)
United Kingdom	3.2	24.2
France	2.7	20.5
Italy	1.5	11.4
West Germany	1.4	10.6
Other 12 countries	4.4	33.3
Total	13.2	100.0

Note. Figures based on DeLong and Eichengreen (1991). Shares are broadly consistent with KfW’s historical summary of ERP allocations.

This two-tier mechanism meant the Marshall Plan had both an “external” aspect (immediate delivery of critical imports) and an “internal” aspect (domestic investment of counterpart funds). In Germany, for instance, the counterpart money capitalized the state development bank KfW (Kreditanstalt für Wiederaufbau) in 1948–1949 (KfW, n.d.-a). KfW then issued low-interest loans for projects in energy, housing, and industry – notably coal and steel, which received about half of the loan volume in the early years (KfW, n.d.-b). Each loan to a factory or business helped restore production capacity. As borrowers repaid loans to their government, the funds could be lent out again, creating a revolving fund for ongoing recovery (KfW, n.d.-a). This structure – aid being recycled into domestic loans – formed a “virtuous circle” supporting self-sustaining growth. The ERP also required coordination: aided countries had to cooperate via the OEEC (forerunner of the OECD) to allocate resources and reduce trade barriers (Tarnoff, 2018). In sum, the Marshall Plan’s design blended grant aid with loans, local ownership, and policy conditions encouraging free markets and integration.

SME Effect. Although the Marshall Plan’s funds primarily bolstered national infrastructure and major industries, a significant indirect benefit was its impact on small and medium-sized enterprises (SMEs). By stabilizing economies and restoring supply chains, the Plan created an environment in which local businesses could revive and grow. Marshall Plan aid was structured to empower the private sector: governments were required to use ERP funds to issue loans to local businesses, effectively channeling capital to thousands of enterprises (Hubbard & Duggan, 2008; KfW, n.d.-a). As loans were repaid and re-loaned, even smaller firms gained access to financing. In West Germany, for example, the KfW’s ERP Special Fund evolved into a long-term source of affordable credit for the *Mittelstand* (small and mid-sized firms) (KfW, n.d.-a). The interest earned on ERP loans expanded the fund over time, allowing continuous support for SME development and innovation in the post-war decades.

By the early 1950s, with basic recovery achieved, policymakers shifted focus to promoting broad-based growth: a portion of revolving ERP funds was dedicated to modernizing factories, supporting start-ups, and encouraging exports – areas where SMEs played a major role (Hubbard & Duggan, 2008). The Plan also catalyzed financial-sector reforms (e.g. currency stabilization, banking development) that improved access to credit for small businesses (Restrepo-Echavarría & Reinbold, 2021). In Italy, for instance, ERP-sponsored productivity programs provided smaller manufacturers with loans to purchase modern U.S. machinery, raising their productivity and competitiveness (Hubbard & Duggan, 2008). Overall, the Plan’s infusion of capital and emphasis on free-market policies helped SMEs across Western Europe rebound from wartime devastation. Many family-owned enterprises rebuilt quickly, contributing to job creation and the supply of consumer goods. By mitigating bottlenecks such as shortages of raw materials and working capital, the Marshall Plan enabled smaller businesses to resume operations and

expand. This multiplier effect extended the Plan's impact deep into local economies – contemporary estimates suggested that each dollar of Marshall aid generated roughly four to six dollars of additional output by European producers (Tarnoff, 2018). In short, while large-scale projects grabbed headlines, the recovery of Europe's SME sector – the backbone of the economy – was accelerated and sustained through Marshall Plan credit and pro-business conditions.

Effectiveness. By most assessments, the Marshall Plan was highly effective in accelerating Europe's recovery. The years 1948–1952 saw Western Europe achieve its fastest economic growth in modern history (Tarnoff, 2018). Industrial production surged, and by 1951 output in participating countries exceeded pre-war levels by roughly one-third, while agricultural output also rose above pre-war benchmarks (Tarnoff, 2018). By the end of the program, every participating country's economy had surpassed its 1939 production; in many cases the increase was 35% or more (Tarnoff, 2018). This rapid rebound ended post-war crises of poverty and hunger: rationing and extreme scarcity receded as consumer goods reappeared (Tarnoff, 2018). From 1948 onward, Western Europe entered two decades of strong growth, with rising living standards and near full employment. West Germany's "Wirtschaftswunder" (economic miracle), for example, featured annual GDP growth of over 8% in the early 1950s and unemployment falling below 1% by 1960 (KfW, n.d.-b; Pettinger, 2018).

Scholars generally agree that Marshall Plan aid played a catalytic role in this recovery. Although the total dollar amount of aid was relatively modest – only about 3% of the combined recipient countries' GDP over four years – it provided what ERP administrator Paul Hoffman called the "critical margin" needed for Europe's reboot (Tarnoff, 2018). Beyond the raw numbers, the Plan's policy conditions (such as requiring balanced budgets, anti-inflation measures, and cooperation on trade) helped restore monetary stability and investor confidence (Restrepo-Echavarría & Reinbold, 2021; Tarnoff, 2018). This enabled European governments to relax wartime controls, fight inflation, and create a favorable climate for private investment (Tarnoff, 2018). Many historians note that Europe was already starting to recover by 1948, but credit the Marshall Plan with significantly speeding up growth and removing bottlenecks that could have derailed the upturn (Ferguson, 2007; Tarnoff, 2018). Economists like DeLong and Eichengreen have described the ERP as "history's most successful structural adjustment program" (as cited in Tarnoff, 2018), fostering productivity and trade reforms that boosted long-term growth. Politically, the Plan's success stabilized Western Europe's democracies: with economies improving, Communist parties lost influence and social unrest decreased (Tarnoff, 2018). The OEEC created under the Plan also laid the groundwork for later European integration, ultimately contributing to the formation of the European Union (Tarnoff, 2018).

Applicability to Ukraine. The idea of a modern “Marshall Plan” for Ukraine has gained traction as the country seeks recovery from the destruction caused by Russia’s full-scale invasion. Ukrainian President Volodymyr Zelenskyy has explicitly urged G7 leaders to approve a Marshall Plan-style effort for Ukraine’s reconstruction (Reuters, 2024). The scale of damage is enormous: as of 2024, the World Bank and partners estimated Ukraine’s reconstruction needs at over 400–500 billion U.S. dollars over the next decade (Reuters, 2024). Mobilizing resources on a scale comparable (in relative terms) to the original Marshall Plan – which amounted to several percent of U.S. GDP – will require a broad coalition of allies, international institutions, and private investors (Rickert, 2024; Tarnoff, 2018).

Applying Marshall Plan principles to Ukraine means focusing not only on pouring in money, but also on structural transformation. First, like the ERP, aid must be well-coordinated and linked to reforms. Donor nations and institutions (for example, the EU, G7, and World Bank) are working with the Ukrainian government to create a joint reconstruction platform, similar in spirit to the OEEC, to prioritize projects and ensure transparency (Rickert, 2024). Second, echoing the original Plan’s “help them help themselves” ethos, funds should support Ukraine’s private sector – especially SMEs – to restart local production and employment. This could involve establishing an “ERP Fund for Ukraine” to provide low-interest loans and grants to Ukrainian businesses, similar to how KfW’s ERP Special Fund supported German SMEs (Hubbard & Duggan, 2008; KfW, n.d.-a). International financial institutions have already begun offering such credit lines, but a Marshall-Plan approach would scale this up dramatically.

Third, strong conditions on governance and anti-corruption should mirror the Marshall Plan’s emphasis on sound economic management. Ukraine has made notable progress in reforms in recent years, but a massive aid program will require strict transparency, rule of law, and integrity in public procurement to reassure donors and citizens (Reuters, 2024; Rickert, 2024). Fourth, regional integration and trade expansion – key goals of the 1948 Plan – are equally relevant now. A “Marshall Plan for Ukraine” would aim to firmly anchor Ukraine in the European and global economy, via infrastructure that connects it to EU markets, energy grids, and supply chains (Rickert, 2024). Finally, timing and commitment are crucial. The Marshall Plan delivered most aid within four years; Ukraine’s needs, while likely to span a decade or more, demand front-loaded assistance to rebuild housing, power systems, and roads as soon as security conditions allow (Tarnoff, 2018). The potential payoff resembles post-WWII Europe: a flourishing Ukrainian economy would enhance regional stability and reduce future aid burdens. However, challenges abound – the war is ongoing in parts of Ukraine, and donor fatigue or political obstacles could impede support. To address this, some experts propose using frozen Russian assets to fund Ukraine’s recovery,

arguing that it would be similar in spirit to how defeated aggressors were handled after 1945 (Rickert, 2024).

In conclusion, the Marshall Plan’s legacy offers a powerful blueprint for Ukraine. Large-scale financial aid tied to liberalization and institution-building can kick-start recovery even after immense destruction (Hubbard & Duggan, 2008; Tarnoff, 2018). With sufficient international resolve, a modern ERP for Ukraine could restore its infrastructure, revive SMEs, and set the country on a path of sustainable growth – much as the original Plan did for Western Europe, but adapted to Ukraine’s twenty-first-century context and needs (Reuters, 2024; Rickert, 2024).

3.5 Cross-country comparison

This section compares five cases: Germany (Marshall Plan and ERP–KfW model), Japan, the Republic of Korea, Israel and Ukraine. The goal is to understand how different countries used MSMEs and MSME finance to support post-war or post-crisis recovery and long-term growth, and what this means for Ukraine today (IfM Bonn, 2023; OECD, 2016; UNDP et al., 2024).

Table 27. SMEs in the economy (latest available data)

Country	Reference year*	SME share in number of enterprises (%)	SME share in employment (%)	SME share in value added / business GDP (%)	Source
Germany	2021–2022	≈ 99.2 of all companies are SMEs; more than 3.4 million firms	≈ 58 of all employees work in SMEs	≈ 47–55.7 of total net value added is produced by SMEs	IfM Bonn, based on Eurostat and national statistics (IfM Bonn, 2023).
Japan	2014–2016	99.7 of all enterprises are SMEs	≈ 70 of private-sector jobs are in SMEs	≈ 55 of gross value added is created by SMEs	2016 White Paper on Small and Medium Enterprises in Japan (SME Agency & METI, 2016).
Republic of Korea	2022–2023	99.9 of all enterprises are SMEs	81 of employment is in SMEs	65.3 of value added is created by SMEs	<i>Jump-up Strategy for SMEs</i> (Ministry of SMEs and Startups, 2023).
Israel	~2018–2020	99.8 of all employer businesses are SMEs	68.7 of the business workforce is	62.3 of business-economy value added is	OECD-referenced empirical study on Israeli SMEs (Leading the challenges of

			employed in SMEs	generated by SMEs	implementing new technologies..., 2022).
Ukraine	End of 2023	99.98 of all business entities are MSMEs	74 of all jobs are in MSMEs	64 of value added is created by MSMEs	UNDP, Centre for Economic Recovery & Advanter Group (2024) assessment of war impact on MSMEs.

* Reference year indicates the latest available data in the cited source; exact years differ slightly by country but all are recent pre- or post-crisis observations.

In all five countries, MSMEs are the backbone of the economy. Table 27 “SMEs in the economy (latest available data)” shows that SMEs make up almost all firms and provide more than half of employment and value added. For example, in Ukraine MSMEs account for 99.98% of all business entities, provide 74% of all jobs and create 64% of value added (UNDP et al., 2024).

In Germany, SMEs (the *Mittelstand*) represent more than 99% of companies, employ about 19 million people and generate more than 55% of total net value added (IfM Bonn, 2023). In Korea, SMEs account for 99.9% of all enterprises, generate 81% of employment and 65.3% of value added (Ministry of SMEs and Startups, 2023). In Japan, SMEs employ the majority of the workforce (about 34 million workers out of 48 million) and represent almost all enterprises (SME Agency, 2016).

OECD analysis of Israel shows a similar picture: SMEs account for almost all employer businesses and around two-thirds of employment and value added in the business economy (OECD, 2016). Thus, structurally, Ukraine is similar to the comparator countries: MSMEs dominate in terms of number of firms, jobs and value added (UNDP et al., 2024).

At the same time, the policy models for supporting MSMEs are different. Germany used the Marshall Plan counterpart funds to build the ERP Special Fund at KfW and a long-term system of concessional loans and guarantees for SMEs (KfW, 2025). Japan and Korea rely on large credit-guarantee systems and policy-based banks such as JFC, KODIT and KIBO (Japan SME Agency, 2016; Ministry of SMEs and Startups, 2023). Israel built a strong innovation and venture capital ecosystem for SMEs (OECD, 2016).

Ukraine has built, mainly after 2020, a modern core of SME finance: the “Affordable Loans 5–7–9%” program, portfolio state guarantees and a set of grant schemes and technical assistance windows, many of them co-financed by IFIs and donors (Ministry of Economy of Ukraine, 2025). Since the launch of the 5–7–9% program in 2020, businesses have received about 117,000 loans totaling around UAH 405 billion (Ministry of Economy of Ukraine, 2025).

To compare these very different cases in a structured way, the thesis uses a KPI matrix. This matrix links three groups of indicators – structure of the SME sector, depth and quality of SME finance, and resilience and development outcomes – with the intensity of support instruments in each country (IfM Bonn, 2023; OECD, 2016; UNDP et al., 2024). The logic of this matrix is explained in section 3.5.1 and summarized in Tables 28 and APPENDIX B.

KPI matrix is a tool that helps to compare very different MSME support systems in Germany, Japan, Korea, Israel and Ukraine. It connects what governments do (policy instruments) with what results they get (outcomes for MSMEs and the economy). The matrix is built using official statistics and analytical reports by UNDP, OECD, IfM Bonn, the SME Agency & METI in Japan and the Ministry of SMEs and Startups of Korea (IfM Bonn, 2023; Japan SME Agency, 2016; Ministry of SMEs and Startups, 2023; OECD, 2016; UNDP et al., 2024).

The KPI matrix uses three groups of indicators: (1) structure of the SME sector; (2) depth and quality of SME finance; and (3) resilience and development outcomes. These groups are summarized in Table 28 “KPI groups for cross-country comparison”.

Table 28. KPI groups for cross-country comparison

KPI group	KPI indicator	
Group 1: Structure of the SME sector	SME share of all enterprises	Share of SMEs in the total number of registered business entities; shows if SMEs dominate the enterprise sector.
	SME share of employment	Share of total employment provided by SMEs; shows the role of SMEs as employers.
	SME share of value added / GDP	Share of value added (or GDP) created by SMEs; shows their contribution to output.
Group 2: Depth and quality of SME finance	SME loans as % of total business credit	Share of total bank credit going to SMEs; indicates how integrated SMEs are in the banking system.
	Volume/share of loans with public guarantees / via development banks	Amount and share of SME credit backed by public guarantees or development banks; shows the role of the state in risk-sharing.
	Share of SMEs with access to bank credit	Share of SMEs that actually have a bank loan or credit line; shows how many firms are reached by finance.
	Share of R&D / venture capital going to SMEs	Share of total R&D spending or venture capital captured by SMEs and start-ups; shows innovation-oriented finance.

Group 3: Resilience and development outcomes	Survival rate of supported firms (3–5 years)	Share of beneficiary SMEs that continue to operate 3–5 years after support; shows resilience and additionality.
	Employment growth in beneficiary SMEs	Change in employment in supported SMEs compared with similar non-supported firms; shows job impact.
	SME share in exports	Share of exports generated by SMEs (directly and indirectly); shows their integration into value chains.
	Speed of macro recovery after a major shock	How fast GDP, employment and private investment recover after war/crisis, with SME support as a contributing factor.

Group 1 – structure of the SME sector. This group includes indicators such as the share of SMEs in the number of enterprises, in employment and in value added / GDP. These are the “basic facts” that show how important SMEs are in each economy. They are already presented numerically in Table 27 “SMEs in the economy (latest available data)” (IfM Bonn, 2023; OECD, 2016; UNDP et al., 2024).

Group 2 – depth and quality of SME finance. This group focuses on how strongly SMEs are included in the financial system. Typical indicators are: SME loans as a share of total business credit, the volume and share of loans with public guarantees or via development banks, the share of SMEs that actually have a bank loan, and the share of R&D or venture capital going to SMEs and start-ups (KfW, 2025; Ministry of SMEs and Startups, 2023; OECD, 2016).

Group 3 – resilience and development outcomes. This group looks at the results of MSME support: survival rates of supported firms after three to five years, employment growth in beneficiary SMEs, the SME share in exports and the speed of macroeconomic recovery after major shocks. For Ukraine, the UNDP assessment emphasizes that even under full-scale war, MSMEs still provide 74% of jobs and 64% of value added, which is a key element of economic resilience (UNDP et al., 2024). OECD analysis of Israel documents strong additionality of innovation support programs, but also a productivity gap in traditional SMEs (OECD, 2016).

To link indicators and instruments, the thesis uses a qualitative scale in APPENDIX A. “Intensity of MSME support instruments (qualitative matrix)”. For each combination of country and instrument, the intensity is rated as High (H), Medium (M), Emerging (E) or Low (L). This rating is based on the scale of resources, the degree of institutionalization and the centrality of the instrument in national SME policy (KfW, 2025; OECD, 2016; UNDP et al., 2024).

In short: Table 28 shows the three KPI groups and assigns each KPI indicator to one group, APPENDIX B. provides illustrative benchmarks by country. The qualitative intensity of instruments

(H/M/E/L) is then analyzed in APPENDIX A. and used in section 3.5 to derive lessons for Ukraine (IfM Bonn, 2023; OECD, 2016; UNDP et al., 2024).

Lessons for Ukraine. The cross-country comparison using the KPI matrix shows that Ukraine is structurally similar to Germany, Japan, Korea and Israel: MSMEs dominate in the number of firms, jobs and value added (IfM Bonn, 2023; OECD, 2016; UNDP et al., 2024). At the same time, Ukraine is still in an early stage of building a full MSME support system that combines bank-based finance, innovation, export and cluster policies.

Lesson 1 – MSMEs must be a central pillar of recovery, not a side topic. In all benchmark countries, SMEs provide more than half of employment and value added (IfM Bonn, 2023; OECD, 2016). For Ukraine, MSMEs provide 74% of jobs and 64% of value added, even during full-scale war (UNDP et al., 2024). This means that recovery and reconstruction strategies that do not put MSMEs at the center are unlikely to succeed.

Lesson 2 – consolidate and institutionalize the bank-based finance pillar. Germany, Japan and Korea show the strength of a bank-centered model with development banks and credit guarantees such as ERP–KfW, JFC, KODIT and KIBO (Japan SME Agency, 2016; KfW, 2025; Ministry of SMEs and Startups, 2023). Ukraine’s 5–7–9% program and portfolio guarantees are already a core pillar of SME finance, but they are still managed mainly as emergency tools (Ministry of Economy of Ukraine, 2025). For the medium term, these programs should be stabilized in law, linked to clear KPI targets (for example, SME loan share, jobs in beneficiary firms) and coordinated with commercial banks’ own SME strategies.

Lesson 3 – build a strong innovation and venture-capital pillar. Israel shows how a focused innovation ecosystem (Innovation Authority, incubators, VC funds) can turn SMEs into a driver of high-tech exports and productivity growth (OECD, 2016). Korea and Japan also devote substantial resources to SME R&D and technology upgrading (Japan SME Agency, 2016; Ministry of SMEs and Startups, 2023). In Ukraine, most resources still go to concessional loans and basic grants, while innovation and VC instruments remain at an emerging stage (UNDP et al., 2024; see also APPENDIX B.).

For Ukraine, this means that donor and state programs should gradually shift part of their focus from pure survival to innovation and technology upgrading: support for R&D projects in SMEs, co-investment funds with private VC, and innovation grants linked to export and green transition (OECD, 2016; UNDP et al., 2024).

Lesson 4 – integrate export and cluster policies with SME finance. Korea and Germany show that SME finance works best when it is linked to export promotion and industrial clusters – for example, supplier development programs, export credit and cluster-based support (IfM Bonn, 2023; Ministry of

SMEs and Startups, 2023). For Ukraine, where war has damaged logistics and markets, SME export and cluster support is still relatively low intensity compared with concessional loans (UNDP et al., 2024; APPENDIX A.).

A practical lesson is to connect 5–7–9% loans and grant schemes with export-oriented projects and clusters: for example, priority scoring or better terms for SMEs that join industrial parks, export consortia or regional value chains.

Lesson 5 – use the KPI matrix for monitoring and evaluation. Benchmark countries regularly evaluate their SME instruments (KfW, JFC, Israeli innovation and guarantee schemes) in terms of survival, jobs and productivity (Japan SME Agency, 2016; KfW, 2025; OECD, 2016). Ukraine can use the KPI matrix from this thesis as a practical monitoring framework: for each major program (5–7–9%, portfolio guarantees, grants, donor lines), set quantitative targets for the indicators in Tables 28 and APPENDIX B. and track them annually (Ministry of Economy of Ukraine, 2025; UNDP et al., 2024).

In this way, the MSME support system can gradually move from ad hoc crisis response to a coherent recovery and development strategy, where instruments are aligned with clear KPIs and international good practice (IfM Bonn, 2023; OECD, 2016; UNDP et al., 2024).

CHAPTER 4. BANK-HUB STRATEGY FOR MSME RECOVERY IN UKRAINE

4.1 Role of banks in postwar recovery

International experience shows that commercial banks are the main transmission channel for MSME support during and after crises. In the Marshall Plan, Japan's post-war SME policy, South Korea's export-led strategy, and Israel's credit guarantee schemes, governments and donors designed programs, but banks implemented them at scale (OECD, 2024; IFC, 2021).

Ukraine follows the same pattern. Despite the full-scale war, the banking system remained stable, and banks continued to lend to MSMEs. According to the National Bank of Ukraine, the quality of new corporate lending, including MSME loans, has remained relatively sound even under wartime stress (NBU, 2024).

Since 2022, banks have become the core infrastructure for delivering almost all key MSME financial instruments: the Affordable Loans 5-7-9% interest-subsidy program, state portfolio guarantees, grant schemes under eRobota and Made in Ukraine, as well as donor risk-sharing and blended finance facilities (FRP, 2025; Ministry of Economy of Ukraine, 2024). The consolidated scale of these instruments is summarized in Table 29.

Table 29. Key MSME Support Channels in Ukraine (2020–2025, cumulative where available)

Support Channel	Mechanism	Scale (latest available)	Financial Effect (approx.)
Affordable Loans 5-7-9%	State interest-rate subsidy implemented via FRP and partner banks.	From program launch in Feb 2020 to 1 Jan 2025: <ul style="list-style-type: none"> - 104,456 loans, UAH 366.0 bn total lending; - UAH 44.85 bn interest compensation paid 	1 UAH of budget interest compensation → ~ 8.2 UAH of MSME loans (366.0 / 44.85), confirming a high leverage of the subsidy.
State Portfolio Guarantees	Up to 50% state guarantee on loan principal; banks retain partial risk.	Since start in Dec 2020: <ul style="list-style-type: none"> - 49,787 loans, UAH 161.9 bn total lending; - guaranteed principal ≈ UAH 33.1 bn; - guarantee limit UAH 51.7 bn 	1 UAH of guaranteed principal → ~ 4.9 UAH of loans (161.9 / 33.1); relative to guarantee limit, ≈3.1 UAH per 1 UAH of guarantee ceiling. This falls within the 2–4× mobilization range observed in OECD

			guarantee schemes. (deval.org)
eRobota Microgrants & Business Grants	Direct non-repayable grants	By 2024–2025: <ul style="list-style-type: none"> - state invested about UAH 9.3 bn in grants; - more than 22–24 thousand entrepreneurs supported; - >60,000 jobs created; - about UAH 7 bn of taxes and social contributions already paid back 	At least 0.6 UAH of tax revenue already returned per 1 UAH of grant ($7 / 9.3 \approx 0.75$, reported as ~60%), plus future tax flows and employment effects. De facto output multiplier exceeds 1 in the medium term.
Made in Ukraine / Processing Grants	Larger capital grants for processing, manufacturing and localization.	Hundreds of projects approved by 2024; focus on processing industries, localization and higher value-added exports	Quantitative multipliers depend on sector, but international evidence suggests 20–40% productivity gains in supported firms and strong long-term GDP impact. (Stylised effect, consistent with EU structural funds evaluations).
Donor Risk-Sharing Facilities (e.g., EBRD, EFSE, EU4Business, IFC/DFC)	First-loss pieces, guarantees and risk-sharing lines combining donor and MDB capital with bank lending.	Several Ukrainian banks (including Oschadbank, Ukrgasbank, PrivatBank, Raiffeisen, Bank Lviv) participate in PRS and blended facilities, enabling hundreds of millions of euros of MSME loans	International evaluations show 4–6× total leverage of donor risk capital in such facilities (i.e., 1 UAH of donor risk-sharing supports 4–6 UAH of loans), in line with generic blended-finance benchmarks .

Source: Ministry of Economy of Ukraine, 2024; OECD, 2024; IFC, 2021; Govt communications, 2023–2024.

As of 1 January 2025, businesses had received about 104,456 loans for UAH 366.0 billion under the 5-7-9% program, while total paid interest compensation reached UAH 44.85 billion (Delo.ua, 2025). This implies that 1 UAH of budget interest compensation generated around 8.2 UAH of MSME lending, consistent with international evidence on subsidized credit multipliers (see the “Financial Effect” column in Table 29).

State portfolio guarantees also demonstrate strong leverage. From December 2020 to early 2025, MSMEs received almost 49,800 loans totaling about UAH 161.9 billion under portfolio guarantees, while the guaranteed principal amounted to roughly UAH 33.1 billion and the guarantee limit was UAH 51.7

billion (Ministry of Finance of Ukraine, 2024; 2025). This means that 1 UAH of guaranteed principal has mobilized about 4.9 UAH of loans, or about 3.1 UAH per 1 UAH of guarantee limit (see Table 29).

Grant instruments under eRobota reinforce this pattern. By 2024, the state had invested about UAH 9.3 billion in business grants, creating more than 60,000 jobs and already returning almost UAH 7 billion in taxes and social contributions, which is around 60% of the invested funds (Finance.ua, 2024; Skilky-Skilky, 2024). These effects also appear in Table 29 under the “Financial Effect” column.

Table 29 therefore summarizes a blended architecture where interest subsidies, state guarantees, grants and donor risk-sharing are channeled through banks. This configuration closely mirrors the “bank-centered blended finance” models observed in EU recovery instruments and other OECD economies (OECD, 2024; InvestEU, 2022).

Empirical evaluations of guarantee schemes and blended finance instruments show that 1 unit of public guarantee typically mobilizes around 2–4 units of private lending, while 1 unit of public risk capital in blended structures can generate roughly 2.5–4.0 units of total investment or output, depending on sector and country context (OECD, 2024; IFC, 2021). These ranges are consistent with the Ukrainian data presented in Table 29.

To make these multipliers more tangible for Ukraine’s recovery, this chapter also uses applied examples based on programs, focusing on: (1) regional interest-rate compensation by military administrations (OVA), and (2) donor cashback schemes such as Sparkasse. These cases are presented in Table 30 and further discussed below (see Table 30).

Table 30. Illustrative Multipliers from Regional and Donor Co-Financing

Case	Public / Donor Input	Loans Mobilized (estimate)	Jobs Supported (estimate)	Tax Revenues (estimate, over project life)	Comment
1. Regional interest-rate compensation (OVA) on MSME loans	UAH 1,000,000 in interest compensation, structured similarly to 5-7-9 and channeled via a partner bank (e.g., Oschadbank).	Using the historic 5-7-9 ratio (366.0 bn loans vs 44.85 bn compensation), 1 UAH subsidy ≈ 8.2 UAH loans . Thus, UAH 1m OVA compensation → ≈ UAH 8–	If each UAH 300–350k of additional credit supports or preserves one formal job (conservative assumption for investment and working capital in	Assuming a combined effective tax take (PIT, SSC, VAT, CIT) of 25–30% of incremental value added, and that financed projects	Demonstrates how relatively small regional co-funding can significantly leverage bank lending, jobs and tax returns when integrated into national 5-7-9-type schemes.

		9m of MSME loans.	MSMEs), UAH 8–9m in loans can support ≈ 25–30 jobs over the medium term.	generate additional output roughly equal to the loan amount over several years, tax revenues can reach ≈ UAH 2–3m.	
2. Sparkasse-type donor cashback blended with MSME loans	UAH 1,000,000 donor cashback or first-loss tranche in a risk-sharing facility with a bank (e.g., Oschadbank + Sparkasse).	Donor RSF facilities in emerging markets typically achieve 4–6× leverage . Thus, UAH 1m of donor cashback → ≈ UAH 4–6m of loans for MSMEs	If targeted at investment-intensive projects with explicit job-creation covenants (e.g., 1–2 jobs per UAH 250–300k of financing), UAH 4–6m in loans can support ≈ 15–20 jobs.	For projects with higher value-added and formal payroll, an effective tax take of 30–35% of incremental value added is realistic. Over the project life, tax revenues can reach ≈ UAH 1.2–2.0m , often approaching or exceeding the initial donor contribution.	Shows how donor funds, when combined with bank underwriting and conditionality, can both catalyze private lending and quickly “recycle” public money through higher tax revenues and formal employment.

Table 30 presents modelled scenarios based on the national multipliers of the 5-7-9 program and donor risk-sharing facilities. These calculations use typical program designs implemented by Ukrainian banks, including Oschadbank, but they are illustrative and do not represent internal financial results of any bank.

In the first example, 1 million UAH of regional interest compensation under a 5-7-9-type design enables a significantly larger stock of MSME loans. Using the historical ratio of total 5-7-9 lending to paid compensation (about 366.0 bn UAH loans vs 44.85 bn UAH compensation as of early 2025), 1 million UAH of OVA compensation can sustain roughly 8–9 million UAH of MSME credit (Delo.ua, 2025). Assuming standard effective tax ratios, this credit volume can generate several million UAH of additional tax revenues over the life of financed projects and support dozens of jobs (see Table 30 for an illustrative scenario).

In the second example, 1 million UAH of Sparkasse-type cashback is combined with bank loans in a blended finance structure. Donor risk-sharing facilities in similar programs often achieve leverage of around 4–6 times the donor contribution (IFC, 2021; EBRD, 2023). This implies that 1 million UAH of donor cashback can catalyze approximately 4–6 million UAH of loans, while strict conditionality on job creation and formalization increases tax revenues. An indicative breakdown is provided in Table 30.

4.2 Comparative analysis of six banks

This subsection compares six banks – PrivatBank, PUMB, Oschadbank, Ukrgasbank, Bank Lviv and Raiffeisen Bank – in terms of their role in MSME support. The comparison is based on a structured desk review of their official websites, public reports, donor press releases, and, for Oschadbank, internal MSME summaries and strategic documents made available for this research (Oschadbank, internal data, 2025).

The full mapping of MSME support instruments for all six banks—covering interest-subsidized loans, state guarantees, state grants, donor/IFI risk-sharing mechanisms, cashback/blended finance and non-financial support—is presented in APPENDIX C. This Appendix serves as a comprehensive matrix of tools used by each institution.

To enable a concise and analytically relevant comparison for the Bank-Hub design, this section highlights (a) how many MSME instrument categories each bank actually uses, and (b) which publicly confirmed financing amounts or program volumes are associated with their MSME operations. These synthesized indicators are presented in Table 31 below.

Table 31. MSME support coverage and financing amounts by six banks (2022–2025)

Bank	MSME support categories used	Publicly confirmed MSME/program financing	Types of support used
Oschadbank	6 / 6	≈ UAH 4bn MSME loans in Q1 2025; MSME portfolio ≈ UAH 31.3bn	Subsidized loans, state guarantees, state grants, donor risk-sharing, cashback/blended finance, non-financial support
PrivatBank	4 / 6	≈ 43.3k 5-7-9 loans	Subsidized loans, state guarantees, grant servicing, basic non-financial support

PUMB	4 / 6	≥ UAH 2bn 5-7-9 loans (public data until 2020)	Subsidized loans, state guarantees, donor risk-sharing, advisory
Ukrigasbank	5 / 6	≈ UAH 8bn SME loans in 2024; ≈ UAH 2bn green projects	Subsidized loans, state guarantees, green grant-linked schemes, donor risk-sharing, advisory
Bank Lviv	5 / 6	EUR 15m loan + 7.5m RSF (≈ EUR 30m enabled); EUR 20m EBRD facility; EUR 7m IFU	Subsidized loans, state guarantees, regional grant schemes, donor risk-sharing, advisory
Raiffeisen Bank	4 / 6	≈ 5.4k 5-7-9 loans	Subsidized loans (selective), state guarantees, donor risk-sharing, advisory

The “MSME support categories used” reflect six standardized clusters of instruments defined in this research and detailed in APPENDIX C.: (1) interest-subsidized loans; (2) state guarantees; (3) state grants; (4) donor/IFI risk-sharing; (5) cashback/blended finance; (6) non-financial support. Only publicly disclosed financing amounts are included. Bank-specific limits under state guarantee schemes or IFI RSF facilities are not publicly available.

The Table 31 shows that all six banks participate in the “Affordable Loans 5-7-9%” programme and use state portfolio guarantees, but their MSME profiles differ substantially. PrivatBank combines the largest retail footprint with strong digital channels; PUMB has a strong industrial and logistics SME base; Ukrigasbank specializes in green and energy-efficiency finance; Bank Lviv plays a regional role with deep donor integration; Raiffeisen Bank focuses on financially resilient mid-caps; and Oschadbank combines a universal network with deep integration into state and donor MSME programs (FRP, 2025; Ministry of Finance of Ukraine, 2024).

Oschadbank’s position among the six banks is unique. According to its internal MSME reports as of nine months of 2025, Oschadbank serves around 262,000 MSME clients (No. 2 in the market), holds an MSME loan portfolio of UAH 31.3bn and an MSME deposit portfolio of UAH 53.5bn, making it one of the largest institutional actors in the MSME segment (Oschadbank, internal data, 2025).

The bank’s wartime footprint is also significant: around 20% of MSME financing is located in frontline and de-occupied territories. Approximately 50% of MSME clients use state or IFI guarantees. More than 24,000 MSMEs received state grants through Oschadbank, with total grant flows exceeding UAH 12.5bn, including UAH 1.5bn of donor grants.

A key blended-finance example is the Sparkasse / German Government cashback program. In 2023–2024, Oschadbank financed 137 MSME projects, generating more than UAH 450m in lending and

UAH 74.2m in cashback grants (up to 30% of investment). Around 76% of beneficiaries were micro and small businesses; 55% employed up to 20 people.

Oschadbank also participates in EU4Business-type guarantees, EBRD and EFSE risk-sharing facilities, and export-support schemes backed by the Export Credit Agency of Ukraine, enabling MSME loans with 50–80% risk coverage and grant elements of 15–30% (EBRD, 2023; EU4Business, 2023).

The detailed MSME metrics of Oschadbank that are most relevant for the Bank-Hub design – including client base structure, loan and deposit dynamics, grant flows, guarantee uptake and donor/IFI risk-sharing penetration – are summarized in APPENDIX D. “Oschadbank MSME metrics relevant for Bank-Hub design (9M 2025)”. This Appendix complements Table 31 and the instrument matrix in APPENDIX C. and forms a key empirical input for Section 4.3 on the Bank-Hub architecture.

Together, APPENDIX C., Table 31 and APPENDIX D. form the full analytical foundation for the development of the Bank-Hub architecture, presented in Section 4.3.



Figure 5. Schematic Flow of MSME Support Through Banks

Figure 5 visually summarizes these flows: public budgets, donors and IFIs provide subsidies, guarantees and risk capital; banks transform these into standardized loan and grant products; MSMEs

then convert them into investment, jobs and tax revenues (see Figure 5). This logic underpins the Bank-Hub strategy developed in Section 4.3.

4.3 Bank-Hub architecture

Ukrainian MSMEs already receive most state and donor support through banks. Interest subsidies, portfolio guarantees, grant schemes and risk-sharing facilities are implemented mainly via commercial and state-owned banks, often using credit lines and guarantee facilities that work through local financial intermediaries (Business Development Fund, 2025; EU4Business, 2025; OECD, 2024).

In 2025, the creation of the National Development Institution (NDI) on the basis of the Business Development Fund formalized this model: the NDI is designed as a “bank of banks” that channels public and donor resources to the real sector via partner banks, with a strong focus on SMEs and recovery projects (Ministry of Finance of Ukraine, 2025; Verkhovna Rada of Ukraine, 2025).

Within this framework, the Bank-Hub in this thesis is understood as an operating model inside partner banks that organizes all MSME support instruments in a coordinated way and connects the NDI/FRP, the Government, donors and MSME clients through a single logic of products, processes and data (KfW Development Bank, 2023; OECD, 2024).

A concise comparison of institutional configurations that can support this architecture is provided in Table 32 at the end of this section.

Functional design. The Bank-Hub is not a single product, but a functional layer inside a bank that manages state and donor instruments for MSMEs. In practice, it can be organized as a cross-functional MSME unit (or “center of competence”) that works with product, risk, IT and front-office teams to ensure that all programs are integrated into one consistent offer for clients.

Functionally, the Bank-Hub combines five core blocks:

1. Program aggregation and mapping. All MSME instruments – subsidized loans (e.g. “5–7–9%”), portfolio guarantees, state and regional grants, donor risk-sharing facilities, cashback schemes – are consolidated into a single internal catalogue with clear links to funding sources (NDI/FRP, state budget, EU4Business, KfW, EIB Group, etc.) (Business Development Fund, 2025; EU4Business, 2025).

2. Standardized product design. The Bank-Hub translates state and donor decisions into standard MSME products: it defines eligibility criteria, documentation packages, pricing and guarantee coverage rules, as well as simple communication materials for front-line staff. Product templates and KPI are

aligned with the OECD “Financing SMEs and Entrepreneurs” Scoreboard framework (OECD, 2024; OECD, 2025).

3. Risk-sharing and leverage management. The Bank-Hub manages the allocation of guarantees and concessional funds from the NDI and international partners in order to expand MSME portfolios while keeping risk within approved limits. This follows the principles used by KfW and the EIB Group, where limited public resources are used to mobilise larger volumes of private lending (KfW Development Bank, 2023; European Investment Bank, 2025; European Investment Fund, 2023).

4. Integration of non-financial support. The Bank-Hub coordinates training, advisory and mentoring programs funded by donors (e.g. EU4Business), so that MSME clients receive a combined package of finance and advisory support, especially for start-ups, women-led, green and veteran-owned businesses (EU4Business, 2025).

5. Internal governance and accountability. Finally, the Bank-Hub defines clear roles (product owners, risk officers, data managers) and internal KPI for MSME programs, ensuring that concessional resources are used transparently and in line with NDI and donor requirements.

In this way, the functional design of the Bank-Hub makes state and donor support visible, standardized and manageable inside a bank, rather than being a set of disconnected programs.

Data integration. A core element of the Bank-Hub architecture is the data and IT layer, which connects partner banks with the NDI/FRP, line ministries and donors. International practice shows that development-bank schemes are most effective when financial flows and outcomes are tracked in a harmonized way (OECD, 2024; OECD, 2025).

For Ukraine, three data-integration components are particularly important:

1. Unified MSME support registry. Each MSME beneficiary should have a unique identifier, and all types of support – subsidized loans, guarantees, grants, donor-backed credit lines and non-financial services – should be recorded in a single registry across all partner banks. This prevents double support, improves targeting and allows the NDI to measure leverage and outreach.

2. Interoperability with state and donor systems. Bank-Hub data should be interoperable with NDI platforms, the Ministry of Economy’s program systems and EU4Business, EIB, KfW and World Bank reporting, so that program-level funding can be reconciled with actual MSME lending and investment (EU4Business, 2025; European Investment Bank, 2025; World Bank, 2025).

3. Analytical dashboards and feedback loops. On the basis of the unified registry, the NDI and partner banks should build dashboards that track leverage ratios, regional and sector distribution, participation of women-led and veteran-owned firms, business survival and tax effects, using indicators

compatible with the OECD “Financing SMEs and Entrepreneurs” Scoreboard (OECD, 2024; OECD, 2025).

In this way, data integration turns the Bank-Hub from a set of isolated financial products into a learning system, where evidence on what works for MSMEs feeds back into policy design at the NDI and government level.

Table 32, inserted after this subsection, summarizes the three institutional models discussed in this thesis (1) NDI as a direct lender, (2) one operational bank-hub, and (3) a multi-bank network with the NDI as apex—and explains why the multi-bank model provides the strongest fit for Ukraine.

Table 32. Institutional options for the Bank-Hub architecture

Option	Pros	Cons
NDI/FRP as single direct MSME bank	<ul style="list-style-type: none"> • Simple narrative: one public “development bank” for MSMEs. • Full control over products, pricing and risk within one institution. 	<ul style="list-style-type: none"> • Conflicts with the NDI law, which mandates a second-tier “bank-of-banks” model rather than a retail bank. • Risks crowding out commercial banks and distorting competition. • Would require building a branch network, retail processes and IT systems from scratch.
Single operational bank-hub (anchor bank)	<ul style="list-style-type: none"> • Fast pilot implementation: only one bank’s IT, procedures and staff must be adapted. • Simple coordination and clear accountability between the NDI, Government, donors and the anchor bank. • Provides a clear case study to measure leverage, outreach and impact. 	<ul style="list-style-type: none"> • High concentration of credit, operational and reputational risks in one institution. • Risk of a de facto monopoly in concessional MSME finance. • Does not fully exploit other banks’ strengths (for example, veteran-focused, green or regional niche programs).
Multi-bank network of operational bank-hubs (NDI as apex)	<ul style="list-style-type: none"> • Fully consistent with the NDI “bank-of-banks” mandate and EU development-bank practice. • Stronger competition between banks, which usually improves service quality and innovation. • Better regional and sector coverage thanks to different bank profiles. • Lower systemic risk: the exit or failure of one bank does not halt programs. 	<ul style="list-style-type: none"> • Higher coordination and IT complexity (need for harmonized rules, data standards and reporting). • Requires clear, transparent selection criteria for partner banks. • Demands stronger central capacity at the NDI/FRP to manage the network of intermediaries.

4.4 Integration with FRP / NDI and donors

The Bank-Hub model can work only if it is closely connected with the Business Development Fund (FRP) and its legal successor – the National Development Institution (NDI) – and with the main donor and IFI programs that support MSMEs. In October 2025 the Verkhovna Rada adopted Law No. 11238, which transforms the FRP into a specialized National Development Institution with a mandate to finance reconstruction and support SMEs through partner banks (Business Development Fund, 2025; Ministry of Finance of Ukraine, 2025; SDM Partners, 2025).

In this architecture, the NDI works as a central development institution at the national level. It attracts resources from the state budget, the EU, international financial institutions and other donors, and passes these resources to partner banks and other intermediaries through credit lines, guarantees, grant windows and interest-compensation schemes (Business Development Fund, 2025; Finway, 2025).

One or several Bank-Hub banks then translate these national programs into real products for MSMEs. They design loan products, internal procedures and IT processes so that a single MSME client can receive a combination of support tools – for example, a recovery grant, a subsidized working-capital loan and an investment loan with a guarantee.

Governance and roles. At the national level, the NDI together with the Government (Ministry of Finance, Ministry of Economy) sets the overall MSME strategy, target groups and tools. They sign framework agreements with international partners (for example, the EU, EIB, EBRD, KfW, the World Bank), decide how much money goes to guarantees, subsidized interest, grants and technical assistance, and approve basic eligibility rules.

At the operational level, each Bank-Hub bank creates an internal MSME development unit that is responsible for implementing NDI and donor programs inside the bank. This unit co-ordinates product design, risk-sharing, staff training, reporting and communication with the NDI and donors. It also builds a pipeline of MSME projects that match national priorities, such as manufacturing, agro-processing, energy efficiency and war-affected regions.

A joint steering committee between the NDI, the Ministry of Finance, the Ministry of Economy and selected Bank-Hub banks can approve annual plans and key performance indicators (KPIs). Examples of KPIs include: total MSME lending, the share of projects in frontline regions, the number of women- and veteran-owned businesses supported, and the volume of green investments.

Product integration and client journey. In the current system, many MSME support tools – grants, guarantees, subsidized loans, export promotion – are managed as separate programs. For entrepreneurs this means different entry points, different application forms and fragmented information.

In the Bank-Hub model, the bank builds a single product map for the MSME life cycle. For example, a war-affected firm can first receive a small recovery grant; then a working-capital loan with interest compensation; and later an investment loan for equipment with a portfolio guarantee and a small grant component.

For each NDI or donor program (for example, the “5–7–9%” loan scheme, portfolio guarantees, eRobota grants, EU4Business and EBRD credit lines), the Bank-Hub defines clear internal rules: eligibility, required documents, scoring and decision-making steps. Front-office staff see these instruments in one IT system and can propose the best combination for each client.

Donor-funded technical assistance – for example, advisory services, digitalization of credit processes, sector studies or financial literacy – should be directed to the Bank-Hub unit. This makes sure that capacity-building directly supports MSME lending and risk management.

Venture capital gap and lessons from Israel. One structural weakness of the Ukrainian MSME ecosystem is the low development of venture capital and early-stage equity funds. Many innovative start-ups and high-risk projects are not ready for bank loans, even with guarantees, because they do not yet have stable cash flows or sufficient collateral.

Israel’s experience shows how public programs can help to build a venture ecosystem around innovative SMEs. In the 1990s the Yozma program combined public money with private venture capital funds and became a catalyst for the Israeli VC industry (Yozma, n.d.; Frenkel et al., 2002).

Today, the Yozma Fund 2.0 encourages institutional investors to invest in Israeli venture funds, while the Startup Fund and technological incubators of the Israel Innovation Authority provide large matching grants and can cover up to about 85% of early-stage project costs (Israel Innovation Authority, 2021; Israel Innovation Authority, 2023; Calcalist, 2023; Tech-incubators one-pager, 2021).

At the same time, Israel operates a state guarantee fund and loan schemes for small businesses. The government guarantees bank loans so that banks are ready to lend to SMEs with limited collateral, while the national SME agency and its Maof network offer advisory and training services (Israel Business, n.d.; Ministry of Economy and Industry, n.d.; SBA / Maof, n.d.).

Together, these instruments form a ladder for innovative firms: incubator and grants at the idea stage; venture capital and growth funds at the scale-up stage; and bank loans and guarantees when the

company becomes bankable. Table 33 summarizes the main Israeli instruments and shows how they link venture capital and bank finance.

Table 33. Israel – key instruments linking venture capital, incubators and bank finance

Instrument / programme	Type and target stage	Main public actor(s)	Link to banks / MSMEs
Yozma (1990s)	Government-backed fund-of-funds and co-investment with private VC funds; early-stage tech start-ups	Ministry of Finance; early Yozma Fund	Helped to create the Israeli VC industry; successful portfolio firms later became bankable SMEs that could borrow from banks (Yozma, n.d.; Frenkel et al., 2002).
Yozma Fund 2.0 (2024–)	Public fund that encourages institutional investors to invest in Israeli VC funds	Israel Innovation Authority; Ministry of Finance	Expands the equity base for start-ups; venture-backed firms later use bank loans for scale-up (Israel Innovation Authority, 2023; Globes, 2023; Calcalist, 2023).
Startup Fund	Grants and matching investments for early-stage start-ups (pre-seed to Series A)	Israel Innovation Authority	De-risks private VC investments and creates a pipeline of companies that can later graduate to bank finance (Israel Innovation Authority, 2023; EIN Presswire, 2023).
Technological Incubators	Public–private incubators; up to ~85% of project budget funded by public grants	Israel Innovation Authority	Incubators invest and mentor high-risk start-ups; graduates later attract VC and bank loans (Tech-incubators one-pager, 2021; Israel Innovation Authority, 2020).
State Guarantee Fund / Loan Fund for Small Businesses	State guarantee scheme and credit fund for SMEs	Government of Israel; Ministry of Finance; participating banks	Government guarantees make banks more willing to lend to SMEs with limited collateral (Israel Business, n.d.; Mercantile Bank, n.d.; Rozenblatt, n.d.).
SME Agency and Maof network	Advisory and business development services for SMEs	Agency for Small and Medium Businesses (Ministry of Economy and Industry)	Improves SME capacity to prepare business plans, apply for grants, and use VC and bank loans effectively (Ministry of Economy and Industry, n.d.; Maof network, n.d.).

For Ukraine, the Bank-Hub cannot replace venture capital funds, but it can work in partnership with the future NDI and private investors. The Bank-Hub can identify high-potential but still risky firms,

refer them to incubators or venture funds, and later provide investment loans when the business becomes more stable.

In addition, the NDI and donors can support inside the Bank-Hub more flexible, higher-risk loan products – for example, long-term loans with grace periods and repayments linked to business results. These “quasi-equity” loans partly behave like equity and can fill the gap before a company receives full venture capital.

4.5 Impact forecast

This section presents an impact forecast of the Bank-Hub model using: (a) actual wartime MSME support delivered by Oschadbank, and (b) a stylized pilot scenario based on a EUR 300 million blended envelope, aligned with the multipliers from Section 4.1 and Tables 29 and 30. All values are expressed in UAH, except for the size of the envelopes in EUR.

The forecast is deliberately conservative and uses only multipliers already documented in Chapter 4.1 for interest subsidies, state guarantees, donor risk-sharing and grants.

Wartime performance of Oschadbank. During 2022–2025, Oschadbank disbursed approximately UAH 65 billion in MSME loans, supporting more than 13,000 MSME projects. Over the same period, the MSME loan portfolio increased from around UAH 8.8 billion (pre-war level) to roughly UAH 31 billion by Q3 2025 (Oschadbank, internal data, 2025). These figures provide the empirical baseline for the Bank-Hub simulation and are summarized in Table 34.

Table 34. Oschadbank wartime MSME support (2022-2025)

Indicator	Period	Value (UAH)	Comment
Total loan disbursements	2022–2025	≈ 65 bn	Total MSME loans disbursed during the war period
MSME projects financed (number of projects)	2022–2025	> 13,000	Approximate number of MSME projects supported
MSME loan portfolio	2021 (pre-war)	≈ 8.8 bn	Baseline MSME portfolio before the full-scale invasion
MSME loan portfolio	Q3 2025	≈ 31 bn	MSME portfolio during wartime growth
Government grants (eRobota), volume	2022–2025	12.5 bn	Total volume of government grants credited to clients
Government grants (eRobota), number	2022–2025	> 24,000	Number of grants credited

IFI cash-back grants	2022–2025	≈ 1.5 bn	Cash-back paid to MSME borrowers (≈10% of loan amount)
No of MSME loans with guarantees	2022–2025	≈ 50%	Share of No of loans with state or IFI guarantees
MSME NPL ratio	2022–2025	Low single-digit	Indicates high survival of financed MSMEs

In addition, Oschadbank processed over 24,000 government grants under the eRobota program with a total volume of about UAH 12.5 billion, and approximately UAH 1.5 billion of IFI cash-back grants (roughly 10% of loan amounts). Around 50% of MSME loans were issued with state or IFI guarantees, while NPL ratios remained low, indicating high survivability of supported businesses (Oschadbank, internal data, 2025).

Pilot simulation: EUR 300m envelope and instrument-level multipliers. To link the Bank-Hub concept with the empirical multipliers in Section 4.1, this subsection models a stylized EUR 300 million MSME support envelope structured as follows:

- EUR 100 million – interest-rate subsidies (5-7-9-type design)
- EUR 100 million – state portfolio guarantees
- EUR 100 million – grants, of which EUR 20 million in donor cash-back / risk-sharing and EUR 80 million in direct grants (eRobota-type schemes)

The multipliers for each instrument follow Section 4.1 and Tables 29 and 30:

- Interest subsidies → 8.2× (from 366.0 bn UAH loans vs 44.85 bn UAH compensation under 5-7-9)
- State portfolio guarantees → 4.9× (161.9 bn UAH loans vs 33.1 bn UAH guaranteed principal)
- Donor risk-sharing / cash-back → 4–6×; for the pilot a mid-point 5× is used
- Direct grants → 1× (direct investment effect), with additional tax and employment benefits

Applying these multipliers to each EUR 100 million block yields the results shown in Table 34:

- Interest subsidies: EUR 100m × 8.2 = EUR 820m of MSME loans → ≈ UAH 34.4 bn
- State guarantees: EUR 100m × 4.9 = EUR 490m of MSME loans → ≈ UAH 20.6 bn
- Donor cash-back (EUR 20m) with 5× leverage: EUR 100m of MSME loans → ≈ UAH 4.2 bn
- Direct grants (EUR 80m) with 1× effect: EUR 80m of investments → ≈ UAH 3.36 bn

In total, the EUR 300m envelope mobilizes about EUR 1.49 bn of MSME finance, which corresponds to approximately UAH 62.6 bn. This implies an aggregate multiplier close to 5.0× per every EUR 300m of blended MSME support (see Table 35).

Table 35. Pilot Bank-Hub simulation with Oschadbank: EUR 300m envelope and multipliers from

Instrument type	Pilot allocation (EUR m)	Multiplier (from Ch. 4.1)	Mobilized finance (EUR m)	Mobilized finance (UAH bn, 1 EUR = 42 UAH)
Interest-rate subsidies (5-7-9-type)	100	8.2×	820	≈ 34.4
State portfolio guarantees	100	4.9×	490	≈ 20.6
Donor cash-back / risk-sharing	20	5×	100	≈ 4.2
Direct investment grants	80	1×	80	≈ 3.4
Total blended envelope	300	—	≈ 1,490	≈ 62.6

Note: The multipliers are taken from Section 4.1 and Tables 29/30. The total implies an aggregated multiplier of approximately 5.0× per EUR 300 million of blended MSME support.

Notably, the resulting UAH 62–63 bn is very close to the UAH 65 bn that Oschadbank has already disbursed to MSMEs during the war, which confirms that the pilot scenario is realistic.

Scaling the pilot to the MSME share of Pillar 2. According to the Government’s recovery architecture, Pillar 2 contains a total “business window” of about EUR 7 billion, of which roughly 70% is expected to be directed to SMEs and MSMEs. This implies an indicative MSME-dedicated envelope of EUR 4.9 billion.

If this EUR 4.9 bn MSME envelope is implemented through a Bank-Hub-type blended architecture with an aggregate multiplier similar to the pilot (≈ 5.0×), the potential total MSME finance would be:

- EUR 4.9 bn × 5.0 ≈ EUR 24.3 bn of MSME loans and investments
- At an exchange rate of 1 EUR = 42 UAH, this equals approximately UAH 1,022 bn of MSME finance (see Table 35).

Table 36. National simulation of the MSME-dedicated Pillar 2 envelope

Step	Parameter / indicator	Value	Comment
1	Pillar 2 “business window”	EUR 7.0 bn	Total business window under Pillar 2 (all instruments)
2	Assumed SME/MSME share of business window	70%	Based on government communications
3	Indicative MSME-dedicated Pillar 2 envelope	EUR 4.9 bn	70% of EUR 7.0 bn
4	Aggregated multiplier (Bank-Hub-style blended architecture)	≈ 5.0×	Derived from pilot simulation in Table 34
5	Total MSME finance (loans + investments)	≈ EUR 24.3 bn	4.9 bn × 5.0
6	Total MSME finance in UAH	≈ UAH 1,022 bn	EUR 24.3 bn × 42 UAH/EUR
7	Oschadbank’s potential share (5–7% of MSME envelope)	≈ UAH 51–72 bn	Illustrative range, comparable to wartime MSME disbursements (~65 bn)

Table 36 summarizes this national-level simulation and links it back to the pilot multipliers.

Even if Oschadbank channels only 5–7% of the MSME-dedicated Pillar 2 envelope as a Bank-Hub, this would correspond to roughly UAH 51–72 bn of MSME financing, which is comparable to its wartime contribution and would significantly strengthen its role as a central implementation platform for blended MSME support.

4.6 Risks and mitigation

The Bank-Hub model can significantly expand MSME access to finance, especially when interest subsidies, guarantees and donor support are coordinated in one place. However, the model also creates several important risks. These risks relate to the war and general economic uncertainty, credit risk in the MSME segment, the operational capacity of banks, the quality of program design and the lack of early-stage capital for innovative firms. (IMF, 2023; World Bank, 2023; OECD, 2024).

For clarity, the main risks are summarized in Table 36 below. A detailed and extended version of the risk matrix is presented in APPENDIX E.

Table 37. Short risk matrix for the Bank-Hub model

Risk category	Description (short)	Probability	Impact	Key mitigation
War & macro uncertainty	War, shocks to energy infrastructure, unstable public finances	High	High	Conservative planning, stress-tests, protection measures
Credit risk	MSME financial losses, relocation, liquidity shortages	Medium–High	High	Guarantees, shared risk with IFIs, strict credit assessment
Operational capacity	Bank must manage several support instruments at once	Medium	High	Separate team, clear responsibilities, improved IT systems
Program design risk	Too many subsidies or excessive guarantees distort the market	Medium	High	Moderate subsidy levels, balanced guarantees, regular reviews
Donor fragmentation	Different rules and procedures across programs	Medium	Medium	Unified processes through Bank-Hub, coordination with donors
FX & funding risk	Currency mismatch between donor funds and UAH lending	Medium	Medium	FX-risk sharing, focus on UAH lending, liquidity buffers
Venture capital gap	Early-stage firms still lack investment capital	Medium	Medium–High	Joint financing with investors, conditional grants

Note. Short version presented for clarity. Full expanded matrix is provided in APPENDIX E., based on IMF (2023), World Bank (2023), OECD (2024), EBRD (2025), CES (2024), CSIS (2023).

War and macroeconomic risks. Ukraine's economy remains exposed to major risks related to the war, possible disruptions of energy supply and delays in external financial support. (IMF, 2023). For the Bank-Hub, this may cause fluctuations in demand for MSME finance and make government subsidies or guarantees less predictable. Recommended mitigation includes conservative multipliers in planning, regular stress-tests and predefined rules on how programs are adjusted if budget pressure increases.

Credit risk and MSME portfolio quality. MSMEs face higher risks due to damaged assets, relocation, logistics problems and unstable revenues. (World Bank, 2023; CSIS, 2023). Oschadbank maintains a low NPL ratio in its MSME portfolio, partly because around 50% of loans are covered by guarantees. (Oschadbank, internal data, 2025). Risk mitigation includes clear eligibility criteria, balanced guarantee coverage (not 100%), shared-risk agreements with IFIs, and advisory support to MSMEs on financial planning and relocation.

Operational capacity risks. Managing several support tools (subsidies, guarantees, grants, donor risk-sharing) creates additional workload for banks. Weak coordination or unclear responsibilities may reduce program effectiveness. (OECD, 2024).

Recommended mitigation includes a dedicated MSME unit within the Bank-Hub, clear separation of credit, risk and compliance functions, a stronger information system and independent reviews by donors or regulators.

Program design risks. If financial support tools are too generous, they may distort the market. Examples include overly large subsidies or guarantees that cover almost the entire loan. (OECD, 2024).

Mitigation requires moderate subsidy levels, reasonable guarantee coverage, and regular assessment of whether private lending continues to grow alongside subsidized programs.

Donor coordination risks. MSMEs may struggle if different programs require different procedures or reporting. This increases costs for businesses and reduces their willingness to apply for support.

The Bank-Hub can reduce this risk by providing unified procedures, digital application systems and coordinated monitoring frameworks.

Venture capital gap. Debt-based instruments cannot fully meet the needs of innovative SMEs and start-ups, especially those at early stages that need investment capital rather than loans. (Center for Economic Strategy, 2024).

To address this risk, the Bank-Hub can work with private investors and venture funds through joint financing arrangements and conditional grants that help promising young firms grow before they qualify for bank loans.

CONCLUSIONS AND RECOMENDATIONS

This final section summarizes the key conclusions of the research and then presents practical recommendations derived from the empirical and comparative analysis.

The research analyzed how micro, small and medium enterprises (MSMEs) can become a key driver of Ukraine's wartime resilience and post-war recovery. The work brought together four elements: a review of global MSME support models and evaluation methods; a detailed mapping of Ukrainian state and donor programs in 2022–2024; international case studies of South Korea, Israel, Japan and the Marshall Plan countries; and the design of a Bank-Hub model using Oschadbank as the main example. The analytical framework relied on SME finance and policy evaluation approaches developed by the OECD and the World Bank, but adapted them to the specific conditions of a full-scale war, large-scale physical destruction and high macroeconomic uncertainty (OECD, 2016, 2024; World Bank, 2023, 2025). A cross-country KPI matrix and a set of comparative tables and Appendixes were developed to make the evidence from different chapters comparable and to link program-level results with macroeconomic indicators (APPENDIX A.; APPENDIX B.; Table 27).

At the same time, the conclusions should be read with several limitations in mind. The analysis is based on wartime data, which are fragmented and not fully comparable across sources: part of the evidence comes from operational statistics, program records and rapid surveys, with possible reporting lags and gaps (especially for micro and informal firms). In addition, several support instruments worked in parallel, and regional security conditions and bank practices differed, so it is difficult to separate the impact of one program from other factors. Therefore, the results show strong policy-relevant patterns, but they should not be treated as fully causal estimates.

International comparisons are also limited. Unlike Japan, South Korea and the Marshall Plan context, where reconstruction policy was largely scaled after the end of active hostilities, Ukraine introduced and adjusted MSME support during an ongoing war, under much higher uncertainty and risk. The Israel case is useful mainly for the logic of an innovation and venture “ladder” (moving from grants/incubation to venture and equity finance), but this sequence is not directly comparable to Ukraine's 2022–2024 toolkit, which focused mostly on stabilization, liquidity and risk-sharing. For this reason, international cases are used to draw design lessons rather than to transfer quantified effects across countries. With these limitations in mind, the main findings by chapter can be summarized as follows.

Chapter 1 highlighted the structural role of MSMEs in modern economies and in Ukraine in particular. International evidence confirms that MSMEs typically generate the majority of employment

and a large share of value added, especially in services and trade (OECD, 2024; IfM Bonn, 2024). In Ukraine, the data compiled in Table 27 and related figures show that MSMEs provide over 40% of GDP and around 60% of employment, while accounting for more than 99% of registered firms (Ministry of Economy of Ukraine, 2024). Wartime assessments such as RDNA2 and UNDP surveys indicate that although MSMEs suffered heavy physical and financial losses, most of them resumed activity within months after the full-scale invasion, often by relocating or adjusting their business models (UNDP, 2023; World Bank, 2023). This combination of high macroeconomic weight and demonstrated adaptability under extreme stress provides the economic rationale for approaching MSMEs as a central pillar of recovery policy rather than a residual social category.

Chapter 2 analyzed the architecture and performance of Ukraine’s MSME support instruments during 2022–2024. The classification in Table 1 and Table 3 shows that the country has developed a broad portfolio of financial tools, including interest-subsidized loans under the “Affordable Loans 5-7-9%” program, portfolio guarantees, leasing and factoring instruments administered through the Business Development Fund, as well as grants and non-financial support schemes. Tables 6–12 document that, in total, more than one hundred thousand loans were issued under 5-7-9%, with several hundred billion hryvnias of financing, and that over thirty thousand loans were covered by state portfolio guarantees (Ministry of Finance of Ukraine, 2024; Business Development Fund, 2025). Regional tables demonstrate that support was concentrated in relatively safer regions and in agriculture, trade and food processing, while high-tech, service and export-oriented MSMEs received a smaller share. From an economic perspective, these instruments proved effective in stabilizing liquidity and supporting investment in working capital and relocation, but they also created medium-term fiscal commitments and sectoral imbalances that need to be addressed.

The analysis of donor and hybrid programs in Section 2.5 shows that external partners significantly increase the depth and quality of MSME finance. Tables 13–18 summarize the contributions of EU4Business, the EIB and EBRD guarantee and risk-sharing facilities, USAID and other bilateral donors, as well as KfW-supported schemes. For example, EU4Business programs reached around 25,500 MSMEs and generated substantial additional turnover and employment, while the EU4Business Guarantee Facility and EBRD risk-sharing operations achieved leverage ratios of roughly two to four times over the underlying public capital (EU4Business, 2023; EIB, 2023; EBRD, 2024; KfW, 2024). Qualitative evidence from program reports, reflected in Table 19, suggests that donor-backed instruments often score higher on additionality, targeting and transparency than purely national schemes, even though their absolute scale is smaller. Economically, this implies that blending domestic and external resources

through guarantees, risk-sharing and co-financing can raise the overall efficiency of the MSME support system.

Chapter 3 placed the Ukrainian experience in a wider comparative perspective. Using the qualitative matrix in APPENDIX A. and the KPI benchmarks in APPENDIX B., the chapter contrasted Ukraine's instrument mix with that of Germany under the ERP–KfW schemes, Japan, South Korea, Israel and the Marshall Plan period. In all of these cases, MSMEs form almost the entire business population and a large share of employment and value added (OECD, 2016; IfM Bonn, 2024). The cross-country tables show that successful recovery strategies share several features: a clear long-term policy framework for MSMEs; specialized institutions such as development banks, credit-guarantee funds and innovation agencies; and a gradual evolution of the toolkit from simple subsidized credit towards more diversified combinations of guarantees, equity, venture capital and non-financial services (OECD, 2016; Innovation Authority Israel, 2024; METI Japan, 2024). The Marshall Plan example illustrates how predictable long-term finance, channeled through intermediaries such as KfW, can accelerate reconstruction while preserving financial discipline (Restrepo-Echavarría & Reinbold, 2021; KfW, 2024).

Building on this background, Chapter 4 examined the role of banks in delivering MSME support in Ukraine and developed the Bank-Hub concept. Table 31 and APPENDIX C. show that six major banks already act as the main operational channels for state and donor programs, but their degree of integration and specialization differs. Oschadbank stands out as a universal bank with a strong footprint in frontline and de-occupied regions, a large MSME client base and active participation in 5-7-9%, guarantee schemes, grant distribution and donor-backed facilities (Business Development Fund, 2025; Oschadbank, 2025). Table 34 and APPENDIX D. document that during 2022–2025 Oschadbank increased its MSME loan portfolio more than threefold, disbursed around UAH 65 billion in loans and channeled a significant share of state grants. The pilot simulation in Table 35 and the national scenario in Table 36 indicate that, under conservative assumptions, an MSME-dedicated Bank-Hub envelope of EUR 300 million or more could support several thousand additional investment projects and mobilize more than one billion euro of total finance when combined with risk-sharing by IFIs.

At the same time, the extended risk matrix in APPENDIX E. underlines that the Bank-Hub model is exposed to a broad set of risks. War-related macroeconomic shocks, elevated credit risk in MSME portfolios, operational and IT-capacity constraints, and coordination problems between multiple programs can all reduce effectiveness if they are not managed systematically (National Bank of Ukraine, 2024; IMF, 2023; OECD, 2024). The short risk overview in Table 37 shows that mitigation requires a combination of instruments: co-guarantees and risk-sharing with IFIs; conservative sector and regional limits; strong internal governance and audit; unified data standards across programs; and transparent

criteria for selecting participating banks. Economically, this means that the potential gains from consolidating MSME support in bank-hubs are high, but so are the costs of possible failures, so robust risk-management frameworks are an integral part of the model rather than an afterthought.

Taken together, the findings from all chapters support a coherent economic narrative. MSMEs already carry a large share of Ukraine's output and employment and have demonstrated strong resilience under shock, but face persistent finance, risk and information constraints. The state and donors have reacted quickly and at scale, yet the current portfolio of instruments is fragmented, dominated by interest-subsidized debt and not fully aligned with long-term structural priorities. International experience suggests that countries which combine strong development institutions, diversified MSME finance (including guarantee, venture and equity tools) and professional intermediaries such as bank-hubs achieve higher productivity and more balanced growth (OECD, 2016, 2024; WIPO, 2025; World Bank, 2025). Within this context, the Bank-Hub model developed around Oschadbank and other potential hub banks appears technically feasible and economically promising, provided that risk-sharing and data systems are strengthened. The results indicate that MSMEs can realistically become a key driver of Ukraine's recovery if support instruments are better prioritized, bank-hubs are used to connect public and donor resources with viable projects, and a complementary venture and equity pillar is added to finance innovative and high-growth firms.

Building on these conclusions, the recommendations below translate the findings into actionable steps for Ukraine's recovery policy and the proposed Bank-Hub implementation. They focus on improving the efficiency and targeting of public and donor support, strengthening risk-sharing and diversified financing instruments, and upgrading data and monitoring systems to maximize measurable impact.

The empirical and comparative analysis in the previous chapters leads to several practical recommendations. They are formulated from the perspective of an economist and focus on how to allocate scarce public and donor resources more efficiently, how to manage risks in the financial system and how to strengthen the contribution of MSMEs to recovery and long-term growth.

One practical step is to align recovery and reconstruction frameworks with explicit MSME-related targets and indicators. In practice this means that the Recovery Plan, the medium-term budget strategy and key sectoral programs should specify the expected contribution of MSMEs to job creation, investment and exports, and link these expectations to concrete instruments such as 5-7-9, portfolio guarantees, grant schemes and donor facilities (Recovery Plan of Ukraine, 2023; Ministry of Economy of Ukraine, 2024). The KPI system used in Tables 19–20 and APPENDIX B. can serve as a template: outreach, additionality, leverage, fiscal cost and impact indicators. Requiring all major programs in

Tables 1–19 to report against this framework would make it possible to compare them on a like-for-like basis and to gradually reallocate funding towards the instruments with the highest measured impact per unit of public money.

The analysis also points to concrete steps for implementing the Bank-Hub model. A pragmatic sequence is to formalize an MSME hub unit inside Oschadbank, with clear responsibility for aggregating all MSME-related programs, standardizing products, coordinating risk-sharing with IFIs and linking financial products to advisory support (Business Development Fund, 2025; Oschadbank, 2025). Once processes and IT systems are tested, similar hub structures can be rolled out in other banks that already have strong MSME portfolios, as shown in Table 31 and APPENDIX C. At the same time, the National Development Institution can take over “wholesale” functions such as common data platforms, guarantee management and analytics, as suggested in Table 32. This combination would preserve competition between banks while still reaping the efficiency gains from a shared architecture.

It is also reasonable to gradually rebalance the support mix away from large, broadly defined interest subsidies and towards risk-sharing and blended finance. Based on the results in Tables 9 and 19, one practical option is to set a ceiling for the overall fiscal envelope of 5-7-9 interest compensation and to redirect any additional resources to portfolio guarantees, first-loss tranches and risk-sharing facilities with IFIs (Ministry of Finance of Ukraine, 2024; International Finance Corporation, 2021; EBRD, 2024). In operational terms, this would mean that the share of pure interest subsidies in total MSME support gradually decreases, while the share of instruments that mobilise private lending and share risk with donors increases. Such a shift preserves access to affordable credit but reduces pressure on the state budget and improves the risk–return balance for banks.

To support innovative and fast-growing MSMEs, it is advisable to develop a dedicated venture and equity pillar linked to the Bank-Hub model. The case of Israel in Table 33 and the innovation indicators cited in Chapter 3 show that venture capital, incubators and public–private equity funds can significantly raise the number of high-productivity firms (OECD, 2016; Innovation Authority Israel, 2024; WIPO, 2025). In the Ukrainian context, the National Development Institution and the Business Development Fund, together with IFIs and private investors, could establish a fund-of-funds that invests in Ukrainian VC and growth equity funds. Bank-hubs could act as origination partners for these funds, offering quasi-equity products such as revenue-based finance or convertible loans to selected MSME clients. This would give firms with scalable business models access to risk capital that is better suited to innovation than traditional debt.

The analysis also indicates benefits from closer integration of donor instruments at bank-hub level. At present many donor programs operate in parallel, with separate procedures and reporting. A

bank-hub platform can be used to harmonize credit processes, documentation and basic eligibility criteria across state and donor-financed lines (EU4Business, 2023; EIB, 2023; KfW, 2024). In practice, this would allow relationship managers to offer clients a single product range, while internally allocating exposures to different guarantee schemes or risk-sharing facilities. For donors, such a model reduces transaction costs, improves portfolio quality through better screening and monitoring, and creates a clearer picture of the combined impact of their interventions.

Non-financial services should be systematically combined with finance, especially for micro- and early-stage firms. Evidence from EU4Business, USAID projects and bank-based advisory centres shows that training, mentoring and export support can significantly increase the survival and growth of beneficiary firms (EU4Business, 2023; USAID, 2023). For bank-hubs, this means designing standard “finance-plus” packages where loans, guarantees or grants are linked to mandatory or strongly encouraged advisory modules. In practical terms, a micro-business in a frontline region could receive not only a 5-7-9 loan or a small grant, but also structured help with business planning, financial management and access to new markets. This increases the probability that borrowed funds are used productively and reduces credit risk over time.

Another recommendation is to invest in data and IT systems that support evidence-based MSME policy. A shared MSME support database, jointly managed by the National Development Institution, the Business Development Fund, the Ministry of Economy and the National Bank, would allow all major instruments to be tracked at project level (National Bank of Ukraine, 2024; OECD, 2024). Banks and implementing agencies could submit standardized data through APIs, while anonymized dashboards would be published for the public and parliament. Better data would help regulators to identify overheating in certain segments, reduce fraud and double-funding, and allow researchers to estimate the real effects of different programs on productivity, investment and employment.

Finally, MSME support can be used more deliberately to reduce regional disparities and strengthen social cohesion. Tables 8 and 18 show that wartime support has so far been uneven across regions and groups, with relatively lower coverage in frontline and de-occupied areas and for micro-businesses, women-led and youth-led firms. Through bank-hubs, it is possible to design targeted windows or co-funded facilities for these segments, for example by offering slightly higher guarantee coverage, simplified procedures or technical assistance packages (EU4Business, 2023; Sparkasse / GIZ, 2024; Recovery Plan of Ukraine, 2023). From an economic point of view, such measures can unlock underused entrepreneurial potential, speed up recovery in heavily damaged regions and reduce the long-term cost of displacement and unemployment.

APPENDIX A. INTENSITY OF MSME SUPPORT INSTRUMENTS (QUALITATIVE MATRIX, BY COUNTRY AND PERIOD)

Qualitative scale:

- H (High) – core, large-scale national instrument, used systematically many years
- M (Medium) – important, but more limited in scale / coverage
- E (Emerging) – new or still being scaled up
- L (Low) – marginal / fragmented use

Country periods:

Germany – Marshall Plan & ERP–KfW model (≈1948–1970s)

Japan – post-war SME policy (≈1950s–1970s)

Republic of Korea – industrialization period (≈1960s–1980s)

Israel – innovation-led SME policy (≈1990s–2020s)

Ukraine – war-time MSME support (2022–2024)

MSME support instrument → / Country ↓	Germany (ERP–KfW, Marshall Plan, 1948–1970s)	Japan (SME policy, 1950s–1970s)	Republic of Korea (industrialisation, 1960s–1980s)	Israel (innovation & VC, 1990s–2020s)	Ukraine (war-time support, 2022–2024)
1. Concessional / subsidized loans via public or development banks	H – ERP–KfW loans central for reconstruction and SME investment	H – JFC, Shoko Chukin and other policy banks provide large SME loan volumes	H – policy banks and directed credit to SMEs in priority sectors	M – concessional schemes exist but not the main pillar	H – “Affordable Loans 5–7–9%” is the dominant MSME finance tool in war-time
2. Public credit guarantees for SME loans	H – regional guarantee banks and federal schemes strongly support SME lending	H – nationwide Credit Guarantee Corporations cover a large share of SME loans	H – KODIT and KIBO provide extensive guarantees for SME finance	M–H – state guarantee fund plays an important role, especially for SMEs with limited collateral	M – portfolio state guarantees and IFI-backed schemes exist but are smaller than 5–7–9%
3. Investment / modernization	M – targeted grant schemes complement	M – selective grants and	M – grant support for equipment,	M – investment support for	M – grant programmes (e.g. small

n grants for SMEs (non-innovation-specific)	ERP loans in some sectors/regions	subsidies for small business and restructuring	localisation and priority industries	SMEs in disadvantaged regions and traditional sectors	business and self-employment grants) support basic investment and start-up costs
4. Innovation, R&D and venture-capital instruments for SMEs	E–L – early-stage support; innovation mainly via large firms and research institutes	E–M – technology upgrading begins, but SME-focused VC still limited	M – growing use of R&D grants and technology programmes for SMEs by late 1970s–1980s	H – Innovation Authority, incubators and VC co-investment funds form a core policy pillar	E – separate innovation and VC instruments exist but are still small relative to credit/grants
5. Export promotion instruments targeted to SMEs	M–H – strong export credit and guarantees, SME participation via supplier role	H – export-driven strategy with strong trade promotion and export finance	H – export incentives, EPZs and export credit strongly target SME suppliers	M–H – many innovative SMEs are export-oriented; export promotion is well developed	E–M – export promotion for MSMEs is growing (advice, partial guarantees) but still weaker than credit tools
6. Cluster / industrial park / supplier development programmes	M – regional clusters and supplier programmes gradually develop around industry	M – industrial districts and SME groups supported in selected sectors	M–H – industrial complexes and supplier development around chaebol integrate many SMEs	M – technology parks, high-tech clusters and local ecosystems	E – policy framework for industrial parks and clusters exists, but practical implementation is just starting
7. Advisory services, training, business development services for SMEs	M – chambers of commerce, KfW-linked advisory and consulting programmes	M – SME support centres and advisory schemes via local governments and JASMEC	M – public SME support centres, training and consulting services	M – extensive advisory, mentoring and accelerator programmes, especially for start-ups	M – advisory and training through Diia.Business, donor projects and local SME support centres
8. Crisis-specific support measures (war, financial)	H – post-war reconstruction instruments specifically targeted at repairing	H – strong role of policy banks and guarantees in post-war	H – powerful counter-cyclical use of guarantees and policy loans during crises	M – targeted crisis schemes during security	H – broad war-time support: interest subsidies, grace periods,

crises, pandemics)	capital stock and liquidity	and oil- shock periods		shocks and global crises	partial compensation and moratoria linked to MSMEs
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Note: Ratings are qualitative and comparative, based on synthesis of official reports and analytical studies for the respective periods.

APPENDIX B. KPI INDICATORS AND ILLUSTRATIVE BENCHMARKS BY COUNTRY

KPI indicator → / Country ↓	Germany	Japan	Republic of Korea	Israel	Ukraine
2.1 SME loans as % of total business credit	Large, diversified SME loan portfolio via commercial banks and KfW/ERP lines.	Significant SME lending; large part supported by JFC and credit guarantees.	Strong SME lending by commercial and policy banks.	SME credit supported by a state guarantee fund; stronger focus on innovative firms.	SME lending expanded sharply via “Affordable Loans 5–7–9%” during the war (Ministry of Economy of Ukraine, 2025).
2.2 Volume/share of loans with public guarantees / via development banks	KfW/ERP loans and regional guarantee banks provide a sizeable share of SME credit (KfW, 2025).	Credit Guarantee Corporations guarantee a large stock of SME loans (around JPY 36 trillion) (Japan SME Agency, 2016).	Very high levels of guarantees via KODIT and KIBO (Ministry of SMEs and Startups, 2023).	State guarantee fund plus Innovation Authority schemes support SME finance (OECD, 2016).	Portfolio guarantees and IFI-backed schemes exist but are still scaling compared with the 5–7–9% loan programme (Ministry of Economy of Ukraine, 2025).
2.3 Share of SMEs with access to bank credit	Broad access for bankable SMEs; many use KfW-backed products via their house bank (KfW, 2025).	A large share of SMEs rely on guaranteed or JFC loans (Japan SME Agency, 2016).	High access for SMEs through banks and guarantee institutions (Ministry of SMEs and Startups, 2023).	Access varies; high-tech SMEs have better access than traditional SMEs (OECD, 2016).	Access improving but uneven; for many MSMEs, the 5–7–9% programme is the main entry point into formal credit (Ministry of Economy of Ukraine, 2025).

2.4 Share of R&D / VC going to SMEs	Significant R&D support for the Mittelstand; VC more concentrated in specific sectors (IfM Bonn, 2023).	Substantial R&D and innovation grants for SMEs via METI and SME Agency (Japan SME Agency, 2016).	Growing share of R&D and VC targeted at innovative SMEs and start-ups (Ministry of SMEs and Startups, 2023).	Very high share of VC and R&D flows to innovative SMEs and start-ups (OECD, 2016).	Innovation and VC instruments are still emerging; most support is concessional loans and basic grants (UNDP et al., 2024).
3.1 Survival rate of supported firms (3–5 years)	Programme evaluations show strong survival of KfW-supported SMEs after crises (KfW, 2025).	JFC and SME schemes track relatively high survival rates among supported firms (Japan SME Agency, 2016).	Guarantee programmes help SMEs survive downturns and financial crises (Ministry of SMEs and Startups, 2023).	Studies show high additionality and survival among firms supported by guarantee and innovation schemes (OECD, 2016).	War-time survival is the key concern; long-term survival data for supported MSMEs are only starting to accumulate (UNDP et al., 2024).
3.2 Employment growth in beneficiary SMEs	SME schemes are linked to job creation in manufacturing and services (IfM Bonn, 2023).	Investment and modernisation loans support stable employment and gradual job growth (Japan SME Agency, 2016).	SME finance and guarantees support job growth, especially in export-oriented sectors (Ministry of SMEs and Startups, 2023).	Innovation/VC programmes create additional jobs in high-tech SMEs (OECD, 2016).	The 5–7–9% programme helps preserve employment; future evaluations should measure net job creation in beneficiary firms (Ministry of Economy of Ukraine, 2025; UNDP et al., 2024).
3.3 SME share in exports	SMEs contribute strongly to exports via supply chains	Many manufacturing SMEs are integrated into export value	Export-oriented SMEs are important in manufacturing	A large share of innovative SMEs are export-oriented from	SME export capacity is constrained by war and logistics;

	of large firms (IfM Bonn, 2023).	chains (Japan SME Agency, 2016).	and ICT (Ministry of SMEs and Startups, 2023).	the start (OECD, 2016).	dedicated export-support programmes are still being scaled up (UNDP et al., 2024).
3.4 Speed of macro recovery after a major shock	Rapid post-war and post-crisis recovery, with strong contribution of the Mittelstand and ERP–KfW instruments (KfW, 2025).	Fast post-war growth; SMEs played a central role in industrial upgrading (Japan SME Agency, 2016).	Strong recovery after crises (e.g. Asian crisis), with SME support as a key part of industrial policy (Ministry of SMEs and Startups, 2023).	High resilience to shocks thanks to innovation-driven SME sector (OECD, 2016).	Future recovery speed will depend on how effectively war-time MSME support is transformed into a long-term recovery and growth strategy (UNDP et al., 2024).

APPENDIX C. COMPARATIVE MATRIX OF MSME SUPPORT INSTRUMENTS BY BANK (2022–2025)

Bank	Interest-subsidised loans (state / regional)	State guarantees (portfolio / individual)	State grants (as channel / partner)	Donor / IFI risk-sharing facilities	Cashback / blended finance (grants linked to loans)	Non-financial support (training, advisory, incubation)	Main focus segments and remarks
Oschadbank	Yes – wide use of “Affordable Loans 5-7-9%” across investment and working-capital products; additional regional interest-compensation schemes with oblast military administrations	Yes – active use of state portfolio guarantees for MSMEs; guarantees often complement 5-7-9 loans and other credit lines	Yes – major partner for state grant programmes (eRobota microgrants, processing / “Made in Ukraine” grants, agribusiness support); services grant flows and provides co-financing	Yes – multiple risk-sharing and guarantee facilities with EBRD, EFSE, EU4Business-type schemes and other IFIs to support MSME lending and export finance	Yes – Sparkasse / German Government cashback programme (up to 30% grant on investment); other blended-finance pilots combining grants and loans	Yes – participation in programmes for women entrepreneurs (e.g. with business schools and the Ministry of Economy), advisory components in grant-linked products, export advisory with ECA support	Universal MSME bank; strong presence in frontline and de-occupied regions; targeted programmes for women, veterans, agribusiness, exporters and relocated MSMEs; natural candidate for a Bank-Hub core role
PrivatBank	Yes – large-scale participation in “5-7-9%” via digital channels and branch network; strong	Yes – uses state portfolio guarantees to expand lending to MSMEs with	Indirectly yes – acts as servicing bank for clients receiving state grants (e.g. eRobota), with	Yes (selected) – participates in donor-supported SME and digitalisation	Limited / pilot – elements of preferential pricing and bonus	Yes (basic) – online education materials, webinars, digital tools for entrepreneurs;	Very strong in micro and small business across Ukraine; leading digital bank; focus on speed

	focus on fast online processing for micro and small businesses	limited collateral	loans sometimes complementing grant financing	projects (e.g. EBRD / EU4Business-type initiatives)	schemes for business, but no large dedicated cashback programme like Sparkasse	some structured programmes in partnership with state agencies	and convenience for entrepreneurs rather than highly tailored blended-finance structures
PUMB	Yes – participant in “5-7-9%” for SMEs, particularly in industrial and logistics sectors	Yes – uses state guarantee schemes for SME lending	Limited – can service grant recipients’ accounts; in some cases links loans to state or donor grant programmes, though not as a core specialisation	Yes (selected) – cooperates with IFIs under SME and trade-support facilities	Limited – blended elements may appear inside IFI-supported projects, but no large branded cashback programme	Yes – sectoral advisory and information support for industrial/SME clients; participation in some partner training initiatives	Focus on industrial, logistics and trade SMEs; strong transaction services; uses state instruments but with less emphasis on grant–loan integration than Oschadbank
Ukrgasbank	Yes – active in “5-7-9%” for MSMEs, including green and export-oriented projects	Yes – uses state guarantees, especially in combination with green and energy-efficiency loans	Indirectly yes – participates as a financial partner where state grants co-finance energy-efficiency or green projects	Yes (strong) – key partner in EU4Business, green credit lines and risk-sharing facilities with EBRD, EIB and other IFIs focused on climate and environment	Yes (green-blended) – blended structures combining concessional funds, risk-sharing and, in some cases, investment incentives for green MSME projects	Yes – advisory support on green standards, energy efficiency and environmental compliance, often backed by technical assistance	Specialised in green finance; strong role in climate-related MSME investments; combines state and donor tools for environmental transitions

Bank Lviv	Yes – participant in “5-7-9%” with focus on western regions and relocated MSMEs	Yes – uses state guarantee instruments to support SMEs with weaker collateral profiles	Indirectly yes – services clients who receive state grants and local support; in some cases co-finances investment alongside grants	Yes (focused) – partner for EBRD and EFSE risk-sharing facilities targeted at SMEs in western Ukraine and relocated firms	Limited / project-based – blended elements within donor projects; no large-scale branded cashback scheme	Yes – regional advisory and support for relocated businesses; close cooperation with local authorities and chambers	Regional SME bank with strong local knowledge; plays a key role in supporting relocated MSMEs and agribusiness in western Ukraine; high reliance on donor risk-sharing for riskier segments
Raiffeisen Bank	Yes (selective) – uses “5-7-9%” and other concessional schemes, mainly for financially robust SMEs and mid-caps	Yes – uses state guarantees for selected SME loans where appropriate	Indirectly yes – may work with grant recipients where grants and loans are combined in larger projects, though not as a core focus	Yes (strong, mid-cap) – access to IFC, DFC and other IFI risk-sharing and guarantee facilities; broad use of trade and export support instruments	Yes (within structures) – blended finance and structured deals, especially for larger SMEs and mid-caps, sometimes include grant or technical-assistance components	Yes – advisory within corporate/SME relationship banking; access to trade-finance and risk-mitigation expertise	Focus on financially stronger SMEs and mid-caps; strong in export and trade finance; significant IFI risk-sharing but less emphasis on micro or high-risk segments compared to state-owned banks

APPENDIX D. OSCHADBANK MSME METRICS RELEVANT FOR BANK-HUB DESIGN (9M 2025)

Indicator	Value / description
MSME client base	Approximately 262,000 MSME clients ; ranked No. 2 in Ukraine by number of MSME clients.
MSME loan portfolio	Around UAH 31.3 billion on balance; ranked No. 4 in the market; about UAH 3.6 billion growth (+ 12.8%) in 9M 2025.
MSME deposits	Around UAH 53.5 billion ; ranked No. 2 in the market by MSME deposit volume.
Share of MSME financing near the front line	About 20% of MSME financing is provided in territories close to the front line.
Use of guarantee instruments	Roughly 50% of MSME clients use guarantee instruments of the Government of Ukraine and/or international financial institutions.
Number of MSME clients receiving state grants	More than 24,000 MSME clients received state grants in 2022–2025 (microbusiness, processing, agribusiness and other grant windows).
Total volume of grants to MSME clients	Overall grant volume for these clients exceeds UAH 12.5 billion , including both state and donor-funded schemes.
Grants from international financial institutions (IFIs)	Around UAH 1.5 billion of grant support from IFIs channelled to MSMEs via Oschadbank.
Sparkasse / German Government cashback programme	About 137 MSME projects financed; total loan volume more than UAH 450 million ; grant cashback around UAH 74.2 million (up to 30% of project investment); the majority of beneficiaries are micro and small firms (≈76%) with up to 20 employees (≈55%).
Partner programmes (state, donor, corporate)	Around 300 partner programmes realised; approximately UAH 3.3 billion MSME loans issued via partner programmes.
Cooperation with oblast military administrations (OVA)	19 active regional support programmes with oblast military administrations; around 320 MSME clients supported; total interest compensation paid to MSMEs about UAH 33 million .
Export support and ECA-backed products	More than UAH 500 million in financing provided under export-support products backed by the Export Credit Agency of Ukraine; around 65 MSME export projects supported; total facilitated exports approximately UAH 5.8 billion ; additional technical assistance grants for export-oriented MSMEs around USD 0.9 million .
Overall relevance for Bank-Hub	Combination of a large MSME client base, notable exposure in frontline and de-occupied regions, extensive use of guarantees and grants, and multiple blended-finance and partner programmes positions Oschadbank as a natural core node for a Bank-Hub model.

Source: Oschadbank, internal data (MSME reports and consolidated summaries).

Period of analysis: wartime and recovery period 2022–2025; values reflect the situation as of nine months 2025, unless otherwise indicated in the main text.

APPENDIX E. EXTENDED RISK MATRIX FOR THE BANK-HUB MODEL (2024–2027)

Risk category	Description	Probability	Impact	Key mitigation measures	Main responsible actors
War and macroeconomic risk	Risk that the war lasts longer, energy infrastructure is damaged, and external financial support is delayed or reduced.	High	High	Use conservative assumptions and multipliers; run regular stress-tests for the MSME portfolio; agree in advance how programmes will be adjusted if the budget situation worsens.	Government, IFIs, NBU, Bank-Hub banks
Credit risk in MSME portfolio	Higher probability that MSMEs will not repay loans due to damaged assets, relocation, loss of markets and liquidity gaps.	Medium–High	High	Apply clear eligibility criteria; combine loans with state and IFI guarantees; use shared-risk schemes with IFIs; keep strict credit assessment and monitoring standards.	Bank-Hub banks, guarantee funds, IFIs
Operational and capacity risk	Bank-Hub must manage several support tools at once (subsidies, guarantees, grants, donor funds), which increases workload.	Medium	High	Create a dedicated MSME / support-programme team; clearly separate sales, risk and compliance functions; strengthen IT and reporting systems; organise independent reviews.	Bank-Hub banks, regulators, donors
Programme design risk	Support schemes may become too generous (very high subsidies or guarantees), which can distort the market and incentives.	Medium	High	Keep subsidy levels moderate; avoid guarantees that cover almost the full loan; review programmes regularly to see how they affect private lending outside support schemes.	Government, donors, IFIs, Bank-Hub banks
Donor coordination and fragmentation	Many separate programmes with different rules and procedures increase costs for MSMEs and banks and reduce overall impact.	Medium	Medium	Use the Bank-Hub as a common platform for implementation; agree on harmonised procedures and reporting; create joint coordination groups and shared indicators of success.	Government, donors, IFIs, Bank-Hub banks
FX and funding risk	Difference between the currency of donor funds and lending in UAH, as well as volatility of exchange rate and funding cost.	Medium	Medium	Use instruments where IFIs share part of the currency risk; lend to MSMEs mainly in UAH; maintain conservative leverage levels and liquidity buffers.	IFIs, NBU, Bank-Hub banks
Reputational and integrity risk	Risk of perceived unfair distribution of grants and subsidised loans, corruption or conflict of interest.	Medium	High	Apply transparent selection criteria; use digital application channels; conduct random checks; publish summary information; keep strong internal control and compliance systems.	Government agencies, Bank-Hub banks, auditors

Venture capital and innovation gap	Debt products grow, but young and innovative firms still lack investment capital and may rely only on foreign investors.	Medium	Medium - High	Develop joint financing schemes with venture funds and business angels; use conditional or repayable grants; cooperate with innovation agencies to build an investment pipeline.	Bank-Hub banks, VC funds, innovation agencies
MSME absorption capacity	MSMEs may not be ready to use large volumes of finance because of skills gaps and a limited number of good projects.	Medium	Medium	Offer training and advisory programmes for MSMEs; provide technical assistance; roll out programmes step by step; build project pipelines together with business associations.	Bank-Hub banks, donors, business associations

Note. Extended risk matrix prepared by the author to support the analysis in Section 4.6 and to complement the short risk overview in Table 4.6-1.

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