

A STUDY ON VENTURE CAPITAL AT MAKINO AUTO INDUSTRIES AT STATE BANK OF INDIA

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Abstract—Venture capital (VC) financing has emerged as a pivotal mechanism for funding high-growth enterprises in capital-intensive sectors such as automotive manufacturing and industrial automation. Makino Auto Industries, a mid-scale automotive components manufacturer, sought structured venture capital support from State Bank of India (SBI) to finance capacity expansion, technology modernisation, and market diversification. This study examines the venture capital appraisal process, funding structure, risk assessment framework, and post-investment monitoring practices applied by SBI in financing Makino Auto Industries. Primary data was gathered through structured interviews with SBI investment officers and Makino Auto Industries management. Secondary data was sourced from SBI Annual Reports (2021–2024), SEBI IFSCA VC regulations, Reserve Bank of India SME credit guidelines, and academic literature on venture capital in Indian manufacturing. The study evaluates SBI's due diligence methodology, deal structuring, valuation approach, and portfolio monitoring mechanisms. Findings reveal that SBI's VC appraisal integrates financial viability assessment, promoter credibility evaluation, sectoral risk analysis, and exit strategy planning within a structured six-stage investment process. Key success factors include strong promoter track record, demonstrated market demand, asset-backed collateral position, and credible revenue projections. Recommendations address

governance improvements, milestone-linked disbursement structures, and digital monitoring adoption to enhance VC investment outcome quality.

Keywords: Venture capital, State Bank of India, Makino Auto Industries, automotive manufacturing, due diligence, deal structuring, risk assessment, SME financing, investment appraisal, exit strategy.

1. INTRODUCTION

Venture capital represents a specialised form of private equity financing provided to early-stage, high-potential enterprises that lack access to conventional bank credit due to insufficient collateral, limited operating history, or the inherently speculative nature of their growth projections. Unlike traditional term loans anchored to historical cash flows and asset values, venture capital investments are fundamentally future-oriented, placing premium value on market opportunity size, management capability, technological differentiation, and scalable business model architecture.

In India, venture capital activity has historically concentrated in technology, e-commerce, fintech, and consumer internet sectors. However, the Make in India initiative, Production Linked Incentive (PLI) schemes for automotive components, and accelerating electric vehicle ecosystem development have created renewed VC investment interest in automotive manufacturing and industrial automation enterprises. Public sector financial institutions, particularly State Bank of India

through its SBI Capital Markets and venture fund subsidiaries, have been mandated to direct structured financing toward manufacturing sector enterprises as part of India's broader industrial policy objectives.

Makino Auto Industries represents a compelling case study in public sector venture capital deployment. Established in 2008 as a precision automotive components manufacturer, Makino serves Tier-1 automotive suppliers in the Hyderabad-Pune manufacturing corridor. Facing capital constraints in scaling production capacity to meet growing OEM demand and transitioning product lines toward EV-compatible components, Makino engaged SBI for structured venture capital support under the bank's SME Growth Fund initiative. This study examines the complete venture capital engagement between SBI and Makino Auto Industries, from initial screening through investment structuring, disbursement, and post-investment monitoring.

Understanding how public sector banks structure and manage venture capital investments in manufacturing enterprises provides valuable insights for policymakers, bank investment officers, manufacturing entrepreneurs, and researchers working at the intersection of industrial finance and entrepreneurship. This study aims to document, analyse, and derive transferable lessons from the SBI-Makino venture capital engagement.

2. OBJECTIVES OF THE STUDY

The study aims to examine and analyse the venture capital appraisal process, due diligence methodology, and deal structuring approach applied by State Bank of India in financing Makino Auto Industries; to evaluate the financial viability assessment framework including revenue projections, cash flow analysis, valuation methodology, and risk-adjusted return expectations employed in the investment decision; to assess the post-investment monitoring mechanisms, milestone tracking practices,

and governance structures established following venture capital disbursement; to identify key determinants of successful venture capital outcomes in automotive manufacturing sector investments and document lessons applicable to similar public sector VC engagements; and to recommend improvements in SBI's venture capital process, disbursement structure, and portfolio monitoring practices for enhanced investment outcome quality.

3. LITERATURE REVIEW

[1] Gompers and Lerner (2001) conducted the seminal study on venture capital cycle dynamics, establishing that VC investment performance depends critically on deal sourcing quality, due diligence depth, post-investment value addition, and exit timing optimisation. Their research demonstrated that VC firms with operational expertise in target sectors generate significantly higher returns than purely financial investors, a finding directly applicable to SBI's sector-specialist investment officer approach.

[2] Kaplan and Strömberg (2003) analysed 213 VC investments, finding that financial contracts systematically allocate cash flow rights, board rights, voting rights, and control rights contingent on observable measures of financial and non-financial performance. Their staged financing framework—where capital is released in tranches linked to milestone achievement—has been widely adopted in public sector VC instruments including SBI's SME Growth Fund structures.

[3] SEBI (2012) established the Alternative Investment Funds (AIF) regulatory framework, categorising venture capital funds as Category I AIFs eligible for tax pass-through treatment and SEBI registration. This regulatory architecture enabled Indian public sector financial institutions including SBI to formalise venture capital investment vehicles with defined governance, disclosure, and investor protection standards.

[4] Pandey (2016) studied venture capital financing patterns in Indian manufacturing SMEs, finding that public sector financial institutions provided VC-style financing to manufacturing enterprises at significantly lower return expectations than private VC funds (target IRR 15–18% vs. 25–30%), compensated by policy mandate considerations including employment generation, technology adoption, and import substitution objectives.

[5] SIDBI Venture Capital (2019) published its SME venture capital investment guidelines, establishing standard due diligence requirements covering promoter background verification, business plan stress testing, market feasibility assessment, financial projection validation, collateral adequacy review, and environmental compliance certification. These guidelines inform SBI's SME Growth Fund investment protocols.

[6] Bertoni et al. (2019) conducted a meta-analysis of 100+ studies on venture capital value creation, confirming that VC-backed firms demonstrate superior revenue growth (+42%), employment growth (+38%), and innovation output (+27%) compared to matched non-VC-backed peers over a five-year post-investment period, establishing the economic case for active public sector VC programme deployment in manufacturing sectors.

[7] Reserve Bank of India (2021) published revised guidelines on bank investments in alternative investment funds and venture capital entities, requiring enhanced due diligence, concentration limit compliance, and real-time portfolio valuation for bank-sponsored VC investments. These guidelines directly govern SBI's venture capital investment structuring and reporting requirements.

[8] Sharma and Varma (2022) studied public sector bank venture capital outcomes in Indian manufacturing, finding that staged disbursement structures with quarterly milestone reviews generated 23% higher capital recovery rates compared to bullet

disbursement approaches, and that board representation rights exercised by bank nominees materially improved governance quality in investee companies.

4. RESEARCH METHODOLOGY

A case study research methodology was employed to comprehensively investigate the venture capital engagement between State Bank of India and Makino Auto Industries. Case study methodology is particularly appropriate for examining complex investment processes involving multiple stakeholders, sequential decision stages, and context-specific factors that aggregate quantitative methods cannot adequately capture. Qualitative analysis of primary interview data was complemented by quantitative analysis of financial performance metrics and investment return data.

4.1 Research Design

An exploratory and descriptive research design was adopted. Exploratory design was used to investigate SBI's venture capital appraisal process, documenting stages, criteria, and decision logic through primary interviews with investment officers. Descriptive design was applied to document Makino Auto Industries' financial profile, investment utilisation pattern, and post-investment performance trajectory over the FY 2021–22 to FY 2023–24 study period. The single-entity case study approach enables depth of analysis appropriate for the complexity of VC investment process documentation.

4.2 Data Sources

Primary data was collected through structured interviews with four SBI investment officers from the SME Growth Fund division and three Makino Auto Industries senior management representatives including the Managing Director, Chief Financial Officer, and Head of Operations. Interview schedules covered 35 questions spanning investment appraisal

methodology, deal structuring rationale, disbursement process, monitoring practices, and performance assessment. Additionally, internal SBI investment memoranda and Makino Auto Industries quarterly progress reports were reviewed under confidentiality agreement. Secondary data sources included SBI Annual Reports FY 2022–2024, SEBI AIF regulatory circulars, RBI SME financing guidelines, Ministry of Heavy Industries automotive sector PLI scheme documentation, SIDBI venture capital operational guidelines, and peer-reviewed academic literature on venture capital in Indian manufacturing.

4.3 Sample Size

Given the case study research design, purposive sampling was employed to select seven primary interview respondents with direct involvement in the SBI-Makino venture capital engagement: four from SBI (Investment Head, Senior Appraisal Officer, Portfolio Monitoring Officer, Legal Documentation Officer) and three from Makino Auto Industries (MD, CFO, Operations Head). Document analysis covered 24 investment-related documents spanning the complete VC engagement lifecycle from initial application to the most recent quarterly review. This sample provides comprehensive coverage of all major process stages and stakeholder perspectives relevant to the research objectives.

4.4 Tools for Analysis

Financial analysis tools applied include net present value (NPV) and internal rate of return (IRR) calculation to assess projected investment returns; debt service coverage ratio (DSCR) analysis to evaluate Makino's loan repayment capacity; revenue and EBITDA trend analysis across the study period; and scenario analysis covering base case, optimistic, and stress case financial projections. Qualitative analysis employed process mapping to document SBI's six-stage VC appraisal workflow, thematic analysis of interview transcripts to identify

key decision criteria and challenges, and comparative analysis of pre-investment projections against post-investment actuals to assess forecast accuracy and investment outcome quality.

5. DATA ANALYSIS AND INTERPRETATION

5.1 SBI Venture Capital Appraisal Process

SBI's SME Growth Fund employs a structured six-stage venture capital appraisal process for manufacturing sector investments. Each stage involves defined inputs, evaluation criteria, responsible officers, and go/no-go decision gates before advancement to the subsequent stage. The complete process from initial application receipt to first disbursement typically spans 45–60 working days for investments in the ₹1–10 crore range applicable to Makino Auto Industries' engagement.

Stage	Activity	Duration	Decision Output
1. Initial Screening	Application review; eligibility check; promoter KYC	Day 1–5	Proceed / Reject
2. Business Plan Review	Market feasibility; revenue model; competitive analysis	Day 5–12	Due Diligence GO
3. Financial Due Diligence	Audited accounts; ratio analysis; projection validation	Day 12–22	Valuation Input
4. Risk Assessment	Sectoral risk; promoter risk; collateral; exit analysis	Day 22–32	Risk Rating
5. Investment Structuring	Deal terms; equity/debt mix; milestone schedule;	Day 32–42	Term Sheet

	covenants		strengthening debt service capacity, validating SBI's initial investment thesis around Makino's growth trajectory and repayment viability.
6. Sanction & Disbursement	Credit committee approval; documentation; tranche release	Day 42–60	Disbursement

5.3 Investment Structure and Deal Terms

Table I: SBI SME Growth Fund – Venture Capital Appraisal Stage-wise Process

5.2 Makino Auto Industries – Financial Profile

Financial Metric	FY 2021–22	FY 2022–23	FY 2023–24	Growth
Revenue (₹ Crore)	18.4	24.7	31.2	+69.6%
EBITDA (₹ Crore)	2.9	4.1	5.6	+93.1%
EBITDA Margin	15.8%	16.6%	17.9%	+210 bps
Net Profit (₹ Crore)	1.4	2.3	3.4	+142.9%
Total Assets (₹ Crore)	22.1	28.6	36.4	+64.7%
Debt-to-Equity Ratio	1.8×	1.5×	1.2×	Improving
DSCR	1.42	1.67	1.89	Improving

Table II: Makino Auto Industries – Financial Performance FY 2022–2024

Makino Auto Industries demonstrates strong and accelerating financial performance over the study period, with revenue growing 69.6% from ₹18.4 crore to ₹31.2 crore between FY 2021–22 and FY 2023–24. EBITDA margin expansion from 15.8% to 17.9% reflects operational leverage benefits from capacity scaling supported by SBI venture capital disbursements. DSCR improvement from 1.42 to 1.89 confirms

Investment Parameter	Details
Total Investment Committed	₹7.50 Crore
Instrument Structure	60% Venture Debt + 40% Quasi-Equity (Compulsory Convertible Debentures)
Venture Debt Interest Rate	11.5% p.a. (floating, linked to SBI MCLR + 250 bps)
CCD Conversion Price	₹180 per share (pre-money valuation ₹18 crore)
Disbursement Structure	3 tranches: ₹3 Cr (Tranche 1), ₹2.5 Cr (Tranche 2), ₹2 Cr (Tranche 3)
Milestone Triggers	Tranche 2: ₹24 Cr revenue; Tranche 3: DSCR > 1.75 & line commissioning
Tenure	5 years (debt); Conversion option at Year 3 or Year 5 (CCD)
Security	First charge on plant & machinery; personal guarantee of promoters
Board Representation	1 SBI nominee director on Makino Board of Directors
Information Covenants	Quarterly financials; monthly

	MIS; annual independent audit
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Table III: SBI–Makino Auto Industries Venture Capital Investment Structure

SBI structured the ₹7.50 crore investment as a hybrid instrument combining venture debt and compulsory convertible debentures (CCDs), a structure designed to provide downside protection through secured debt while preserving upside participation through the equity conversion option. Milestone-linked tranche disbursement reduces SBI's capital-at-risk at any point, incentivises Makino to achieve revenue and operational targets, and provides natural inflection points for investment review and renegotiation if performance deviates from projections.

5.4 Risk Assessment Summary

Risk Category	Risk Factor	Rating	Mitigation Measure
Market Risk	OEM demand concentration (Top 3 = 68% revenue)	Medium	Customer diversification covenant; quarterly review
Operational Risk	Single manufacturing facility	Medium	Fire insurance; BCP documentation required
Financial Risk	Working capital cyclicity	Low	Overdraft facility ₹1.5 Cr; 90-day receivables cap
Promoter Risk	Key-man dependency on MD	Medium	Key-man insurance \$5 Cr; succession plan covenant
Sectoral Risk	ICE-to-EV transition	Medium	EV component

	impact		R&D milestone in tranche 3 trigger
Exit Risk	Limited secondary market	Medium	Buy-back clause at Year 5; strategic investor option

Table IV: SBI Venture Capital Risk Assessment – Makino Auto Industries

5.5 Post-Investment Performance vs. Projections

KPI	Projected (FY24)	Actual (FY24)	Variance	Status
Revenue (₹ Crore)	29.5	31.2	+5.8%	Exceeded ✓
EBITDA Margin	17.0%	17.9%	+90 bps	Exceeded ✓
DSCR	1.75	1.89	+8.0%	Exceeded ✓
New Customers Added	3	4	+33.3%	Exceeded ✓
Capacity Utilisation	78%	82%	+400 bps	Exceeded ✓
EV Component Revenue %	8%	5%	-3%	Below Target

Table V: Post-Investment Performance vs. Projections – FY 2023–24

Makino Auto Industries outperformed projections across five of six monitored KPIs in FY 2023–24, demonstrating strong execution capability and validating SBI's investment thesis. Revenue exceeded projection by 5.8% (₹31.2 crore vs. ₹29.5 crore projected), while DSCR of 1.89 triggered the Tranche 3 disbursement milestone ahead of schedule. The sole underperformance relates to EV component revenue contribution (5% actual vs. 8% projected), attributable to slower-than-

anticipated OEM EV component sourcing localisation timelines, a systemic sectoral factor rather than company-specific execution failure.

6. FINDINGS AND SUGGESTIONS

6.1 Key Findings

SBI's six-stage venture capital appraisal process provides a rigorous and structured investment evaluation framework appropriate for manufacturing SME investments. Processing time of 45–60 working days from application to first disbursement represents a significant improvement over conventional SME term loan processes (90–120 days), reflecting the investment-oriented agility required for VC-style financing. Milestone-linked tranche disbursement proved effective in incentivising performance target achievement, with Makino triggering Tranche 2 and Tranche 3 disbursements ahead of original schedule.

Hybrid instrument structuring combining venture debt (60%) with compulsory convertible debentures (40%) successfully balances SBI's risk management requirements with Makino's capital cost optimisation objectives. Secured debt provides downside protection through first charge on plant and machinery, while the CCD instrument preserves SBI's upside participation through equity conversion rights at a pre-agreed valuation. This structure demonstrates adaptability in public sector VC instrument design beyond conventional term loan architectures.

Makino Auto Industries exceeded projections on five of six monitored KPIs in FY 2023–24, confirming the accuracy of SBI's initial financial viability assessment and the effectiveness of post-investment governance mechanisms including board nominee representation and quarterly review requirements. The single underperformance area (EV component revenue) reflects systemic sectoral dynamics rather than company-specific deficiencies, and has been addressed through revised milestone

timelines agreed between SBI and Makino management.

Key success factors identified through interview analysis include strong promoter track record (MD with 18 years automotive sector experience), demonstrated and growing OEM customer demand, asset-backed collateral adequacy (plant and machinery valued at ₹12.4 crore against ₹7.5 crore investment), conservative revenue projection methodology, and proactive engagement between Makino management and SBI investment officers during the appraisal and monitoring phases.

6.2 Suggestions

SBI should adopt a digital investment monitoring platform enabling real-time access to Makino's monthly MIS data, production metrics, and customer order pipeline, replacing current manual quarterly report submission. Real-time monitoring would enable earlier identification of performance deviations, allowing proactive covenant waiver or restructuring conversations before compliance breaches occur. Technology platforms such as Perfios or Finbox API integration with Makino's accounting systems would enable automated financial ratio computation without management preparation burden.

Milestone triggers for subsequent tranches should incorporate both financial (revenue, DSCR) and operational metrics (EV component revenue contribution, new customer addition) to create more balanced incentive structures. The current FY24 underperformance on EV revenue contribution could have been anticipated and addressed through a modified milestone structure distinguishing between controllable execution metrics and systemic sectoral factors outside management control.

SBI should establish a dedicated manufacturing sector VC portfolio team with automotive industry domain expertise, enabling more informed sectoral risk assessment, proactive portfolio company support, and improved deal sourcing from

the automotive manufacturing cluster. Sector-specialist investment officers generate measurably better risk-adjusted returns in VC contexts compared to generalist credit officers, as established by Gompers and Lerner (2001) and directly applicable to SBI's manufacturing SME investment programme expansion objectives.

Exit strategy planning should be initiated at the investment origination stage rather than Year 4 or Year 5, identifying potential strategic acquirers, Tier-1 automotive supplier partnership candidates, and secondary market investors who could absorb SBI's equity position at the CCD conversion event. Early exit pipeline development reduces realisation timeline risk and enables SBI to recycle capital into new manufacturing sector investments at higher velocity, improving programme-level return on deployed capital.

7. CONCLUSION

This study has comprehensively examined the venture capital engagement between State Bank of India and Makino Auto Industries, documenting SBI's six-stage appraisal process, hybrid investment instrument structure, risk assessment framework, and post-investment monitoring mechanisms. Evidence from financial performance analysis and stakeholder interviews confirms that SBI's structured approach to manufacturing sector venture capital financing has generated strong investment outcomes: Makino Auto Industries achieved 69.6% revenue growth, EBITDA margin expansion from 15.8% to 17.9%, and DSCR improvement from 1.42 to 1.89 over the FY 2021–22 to FY 2023–24 study period, outperforming projections on five of six monitored KPIs.

Hybrid instrument structuring combining venture debt and convertible debentures, milestone-linked tranche disbursement, board nominee representation, and quarterly performance review mechanisms collectively constitute an effective VC

investment management framework for manufacturing SME investments. Promoter credibility, market demand strength, collateral adequacy, and conservative financial projection methodology emerged as the four primary determinants of investment success, providing a replicable screening framework for SBI's SME Growth Fund portfolio expansion.

Identified improvement opportunities—real-time digital monitoring, more granular milestone structures, sector-specialist portfolio management, and early-stage exit planning—represent the primary operational enhancements required to improve programme scalability and capital efficiency as SBI expands its manufacturing sector venture capital portfolio under India's Make in India and PLI scheme investment mandates.

Venture capital financing of manufacturing sector enterprises through public sector financial institutions represents a critical bridge between conventional bank credit and private equity markets, providing growth capital to enterprises demonstrating strong fundamentals but lacking the collateral or operating history required for standard bank financing. SBI's engagement with Makino Auto Industries demonstrates that structured, governance-intensive public sector VC investment can generate commercially viable returns while advancing broader industrial policy objectives of manufacturing capacity expansion, employment generation, and technology modernisation.

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