

Date of first submission	2026-06-25
Date of acceptance of article for publication after review	2026-07-25
Date of publication/publication	2026-07-25

A Strategic Accounting Architecture Model for Financial Resilience of Small Businesses in the United States

Oksana Boikiv

Accountant / Management Accountant / Founder of Oksana S Group LLC, United States

Bachelor's Degree in Economics (Accounting and Auditing)

Vasyl Stefanyk Precarpathian National University, Ukraine

Email: oksanaboikiv@yahoo.com

ORCID ID: <https://orcid.org/0009-0008-1401-2340>

Abstract. *American small businesses account for nearly half of private-sector employment and 43.5 percent of gross domestic product, yet elevated closure rates and persistent liquidity pressure after 2020 have exposed limits in how accounting practice supports owner-operator decisions in this segment. Existing strategic management accounting literature was developed for firms with formal controllership functions, and small-firm research has fragmented into separate discussions of adoption barriers, specific techniques, and financial literacy without offering an integrated architecture. In response to that gap, the article introduces the Strategic Accounting Architecture Model (SAAM), a three-tier design in which transactional bookkeeping, controlling activity, and strategic decision support are connected through a compliance signal loop. Unlike frameworks organized by perspective, as in the balanced scorecard, or by lever type, as in Simons' levers of control, SAAM organizes controls by decision reversibility and embeds compliance monitoring as an architectural component. The article's principal original contribution is the compliance signal loop, which treats regulatory-regime change as a continuously monitored input to accounting-function design and not as an external shock. Method combines synthesis of managerial-accounting sources with descriptive review of US survival and financial-condition data from the Small Business Administration, the Bureau of Labor Statistics, and the Federal Reserve small-business surveys. Two US-based regime transitions, Corporate Transparency Act beneficial-ownership reporting and the Section 174 research-expenditure rule, illustrate why compliance monitoring belongs inside the accounting architecture. A SAAM Maturity Diagnostic operationalizes each tier at three maturity levels and gives owner-managers and their accountants a shared instrument for assessing where the firm stands. SAAM applies to small firms below fifty employees and ten million dollars in annual revenue.*

Keywords: *strategic management accounting; small business finance; financial resilience; SME controlling; compliance signal loop; SAAM maturity diagnostic*

Introduction

Small businesses in the United States, defined by the Small Business Administration Office of Advocacy (SBA Advocacy) as independent firms with fewer than 500 employees, numbered 34,752,434 in the most recent official count and employ 45.9 percent of the private-sector workforce, or roughly 59 million workers [1]. Their share of gross domestic product stands at 43.5 percent, and only 19,688 firms in the country exceed the 500-employee threshold [1]. Average employment in an employer firm is about 24 workers, and among small employer firms specifically the average drops to 11, indicating that most accounting work in this segment happens without a controller, a chief financial officer, or a formal internal-audit function.

Establishment survival data compiled by the Bureau of Labor Statistics (BLS) show consistent attrition across cohorts opened since 1994: roughly 78 percent of new private-sector establishments remain active at the end of year one, 49 percent reach year five, and 34 percent reach year ten [2]. Attrition is heaviest in the first two years and slows after year four, but the ten-year cumulative loss of about two-thirds of every founding cohort points to structural difficulty in translating start-up momentum into stable financial operations. Cash liquidity is a proximate correlate of that difficulty. Analysis of small-business deposit accounts by the JPMorgan Chase Institute during the initial weeks of the 2020 downturn documented median cash-buffer holdings of roughly two weeks of ordinary outflows for firms with more than 10,000 dollars in monthly expenses [3].

A parallel survey of 5,800 small firms conducted by Bartik and colleagues in April 2020 added expectation-side evidence: only 39 percent of respondents expected to remain open if disruption lasted six months, and mass layoffs occurred within weeks [4]. Post-recovery data from the Federal Reserve Small Business Credit Survey (SBCS) suggest that fragility has proved durable and not transitional. In the 2023 survey cycle, more than nine in ten employer firms reported at least one financial or operational challenge, and 77 percent identified rising costs of goods, services, or wages as the leading pressure [5]. Performance indices tracked by SBCS have recovered from pandemic-era lows but stay below pre-2020 levels, and the revenue performance index has declined in two consecutive cycles [5].

Owner-managers in this segment combine operational, administrative, and financial-reporting functions within a single decision-maker's remit, so that control activities delegated across departments in mid-sized firms compress onto one person or an external accountant engaged for limited hours weekly. Two bodies of literature address the accounting side of that reality but do not connect. Foundational strategic management accounting frameworks, including Simons' levers of control [6], the balanced scorecard [7], the management-control-system typology of Anthony and Govindarajan [8], and the definition adopted by the Institute of Management Accountants [9], assume formal control structures and delegated responsibility centers. Empirical work on small-firm accounting documents adoption barriers, information preferences, financial literacy limits, and specific-technique usage [10; 11; 12; 13], but has not composed an integrated architecture that links transactional recording to strategic decision-making inside a single owner-operator firm. No existing model integrates transactional, controlling, and strategic-decision activities of the SME accounting function with an explicit interface to regulatory-regime changes, a gap that becomes practically consequential when regime changes affect tens of millions of firms within a fifteen-month window.

Between January 2024 and March 2025, US small businesses navigated two such shifts: the effective launch and subsequent rollback of Corporate Transparency Act beneficial-ownership reporting affecting an estimated 32 million entities, and the phased reversal of the Section 174 research-expenditure capitalization requirement introduced under the 2017 tax legislation. Similar regime shifts have occurred throughout the modern history of US small-business regulation, with the Paycheck Protection Program and Employee Retention Credit lifecycles between 2020 and 2024 offering earlier examples, and are likely to continue. Small-firm resilience research [14] and entrepreneurship textbooks [15] treat compliance as an external constraint and not as a strategic input that requires its own architectural position inside the accounting function. Owner-managers require systematic detection of regulatory signals, classification of their tier-level impact, and adjustment of workflows before effective dates, a capability the article formalizes as a compliance signal loop. SAAM emerges from this design requirement as an integrative response to the gap identified above.

Four connected objectives follow. First, the article consolidates the small-firm management-accounting literature into an architectural view organized by decision reversibility and not by technique, and formalizes that view as SAAM. Second, it specifies the

compliance signal loop as an architectural component with three functional elements, using the CTA and Section 174 transitions as illustrative material. Third, it operationalizes the resulting architecture through a SAAM Maturity Diagnostic by which owner-managers and their accountants assess maturity at each tier. Fourth, the article delimits SAAM's scope conditions to firms with fewer than 50 employees and under 10 million dollars in annual revenue, where owner-operator decision structures dominate, and identifies transition points at which SAAM ceases to apply. The 500-employee SBA definition remains the reference population for context statistics, while SAAM addresses the narrower operational subset within it.

Article structure is as follows. Section 2 reviews the SMA and SME-accounting literatures in depth and locates the gap that motivates the model. Section 3 describes materials and methods. Section 4 presents SAAM as an artifact, together with descriptive statistics on US small-business condition and the SAAM Maturity Diagnostic. Section 5 compares SAAM with established SMA frameworks (5.1), presents the compliance signal loop as the distinctive contribution (5.2), places the configurational logic of Wiklund and Shepherd (5.3), states practical positioning (5.4), and delimits limitations (5.5). Section 6 concludes and identifies research directions.

Literature Review

Foundational strategic management accounting operates on assumptions about organizational scale that shape every downstream technique. Simons distinguishes four levers of control (belief, boundary, diagnostic, and interactive), each requiring codified artifacts such as mission statements, ethics codes, budget systems, and strategy-review meetings [6]. Each artifact presumes a management group large enough to receive and debate the signals the lever generates. Kaplan and Norton design the balanced scorecard around four perspectives (financial, customer, internal process, and learning and growth), and in their Chapter 8 treatment of strategic alignment they describe cascading from corporate strategy through business units to individual objectives [7]. Such cascading logic presupposes intermediate managerial layers between strategy formulation and operational execution. Activity-based costing, formalized by Cooper and Kaplan, treats accurate cost measurement as the input to product-line and pricing decisions [16] and requires identification of activities, cost drivers, and resource consumption patterns at an analytical granularity that few owner-manager firms sustain. Anthony and Govindarajan build their management-control-system typology around responsibility centers, distinguishing revenue, expense, profit, and investment centers [8]. Responsibility-center logic requires delegated authority and separate profit-and-loss accountability, both of which dissolve when a single owner-manager holds every function.

Institutional standard-setters have consolidated the strategic reframing of management accounting since 2008. In that year the Institute of Management Accountants adopted a definition placing management accountants as partners in management decision making, in the design of planning and performance-management systems, and in the provision of financial-reporting and control expertise supporting strategy formulation and implementation [9]. Six years later the American Institute of Certified Public Accountants and the Chartered Institute of Management Accountants jointly launched the Global Management Accounting Principles, revised in a 2023 second edition to incorporate digital acceleration and sustainability reporting [17]. Institutional definitions describe the profession's strategic ambition, but their scale-neutral language leaves unspecified how the same professional standard applies when the entire finance function consists of one part-time external accountant working several hours per week.

Empirical research on management accounting inside small firms accumulates observations from national and regional samples. Marriott and Marriott interview owner-managers of fifteen UK small companies and find that they welcome ratios and graphs

accompanied by narrative interpretation, while professional accountants stay reluctant to offer forward-looking services beyond compliance work [10]. Preference for narrative interpretation signals that owner-managers process financial information conversationally, not through periodic report review. Halabi, Barrett, and Dyt extend that finding into Australian small firms via phenomenological interviews, documenting low baseline financial literacy and heavy dependence on the external accountant for meaning-making, not merely for report preparation [11]. Lucas, Prowle, and Lowth broaden the empirical base to UK small and medium enterprises for the Chartered Institute of Management Accountants [12]. Their findings identify a stable practice pattern: pricing analysis, break-even calculation, and working-capital measures dominate, while standard costing and variance analysis remain confined to medium-sized firms with separate departments capable of generating the relevant standards. Malagueño, López-Valeiras, and Gomez-Conde survey Spanish SMEs on balanced-scorecard adoption and find a positive association with innovation and financial performance, dependent on configurational fit, the co-occurrence of multiple control-system elements aligned with a specific organizational context [13]. Cross-referencing across these studies reveals a shared intellectual lineage: Halabi and colleagues [11] and Lucas and colleagues [12] both build on the Marriott and Marriott [10] framing of the compliance-managerial service gap, while Malagueño and colleagues [13] draw on Simons [6] to justify their configurational treatment. Existing cross-study reviews consolidate these findings by technique category, addressing costing, budgeting, or performance measurement in isolation, and not through an architectural view organized around decision horizons.

Entrepreneurship and small-business behavioral research offers a further body of literature that touches accounting only tangentially. Storey and Greene devote their textbook to establishing that small firms operate on decision logics different from those of scaled-down large firms, including higher role compression, lower formalization, and closer coupling between owner personal finance and firm finance [15]. Behavioral treatment maps organizational behavior and firm demography but does not address the design of the internal accounting function. Wiklund and Shepherd test the entrepreneurial-orientation construct on 413 Swedish small businesses and find that its positive effect on performance depends on configurational alignment with environmental dynamism and access to financial capital, with a three-way interaction stronger than any single main effect [19]. Their configurational logic establishes methodological precedent for architectural models built on interaction between components instead of any single main effect, a logic to which the tier-plus-loop structure introduced in Section 3 returns.

Small-firm resilience research develops in parallel and rarely intersects with accounting-function design. Bourletidis and Triantafyllopoulos analyze twenty Greek SMEs during the eurozone crisis and catalogue strategies including price reduction, supplier renegotiation via stock-procurement arrangements, and information-based competitive positioning [14]. Their categorization of information handling as a strategic tool positions it at the level of general-management response, alongside pricing and supplier tactics, and outside the accounting function that would generate the information in the first place. Bartik and colleagues survey 5,800 US small businesses in early 2020, quantify cash-position and Paycheck Protection Program-application behavior at the moment of shock, and connect fragility to survival expectations under alternative durations of disruption [4]. Within that framing, findings remain descriptive of the state at the moment of shock, not prescriptive about how the internal accounting architecture should detect and respond to shocks of longer duration or of regulatory origin as opposed to macroeconomic origin.

Regulatory-regime change appears in each of the reviewed bodies as background and not as an object of architectural design. Foundational SMA texts refer to compliance in the context of external audit or SEC reporting for public companies. SME-empirical studies treat

compliance work as the routine service that displaces managerial services in accountant time budgets [10]. Resilience research counts regulatory support programs among external shocks and reliefs, not among monitored inputs [4]. Behavioral research on small firms mentions institutional context in the aggregate. Primary regulatory documentation exists in substantial volume: the Financial Crimes Enforcement Network (FinCEN) published detailed reporting rules under the Corporate Transparency Act with successive amendments between 2022 and 2025 [18], and comparable primary sources exist for tax, employment, and industry-specific regulation. Compliance-oriented accounting research addresses regulatory response but treats it as a specialized function separate from the strategic-decision architecture of the firm.

The gap identified in Section 1 resolves into four intersecting deficits across the reviewed bodies of literature. Foundational SMA offers architectural depth but assumes structural scale that owner-manager firms lack. Institutional standards describe the profession as a strategic partner without specifying how the partnership operates when there is no chief financial officer with whom to partner. Empirical SME studies map techniques and adoption barriers technique by technique, without connecting them to a decision-horizon architecture. Behavioral and resilience literatures treat compliance and information as strategic inputs at the level of general management, positioning them outside the accounting function itself. These four deficits combine into a single missing artifact: an integrated architectural model for the SME accounting function that spans transactional, controlling, and strategic-decision activities and that treats regulatory-regime change as a continuously monitored input.

Materials and Methods

The article follows a conceptual and analytical design that combines synthesis of managerial-accounting literature with descriptive statistical review of publicly available US small-business data and instrumental-case analysis of two US regulatory transitions. Such a design is appropriate to the research question because the object under construction is an architectural model and not an empirical hypothesis, and validation of such a model proceeds through logical coherence, correspondence with independently sourced field observations, and internal-consistency checks between components [7; 19].

1. Source material

Three categories of source material inform the article.

First, peer-reviewed academic literature. Source identification followed narrative-review conventions [20], with entries traced through backward citation from foundational strategic-management-accounting texts and through forward citation from recent SME-accounting studies indexed in Scopus and Web of Science. Formal systematic-review procedures were not applied, and citation count was not a formal inclusion criterion. Selection prioritized studies that reported design, sample size, and country of origin. Coverage spans foundational SMA texts [6; 7; 8; 16], institutional definitions and principles [9; 17], empirical small-firm accounting research [10; 11; 12; 13], resilience research on small firms during macroeconomic shocks [4; 14], and behavioral research on small-firm decision structures [15; 19].

Second, primary US small-business statistical data. Establishment counts, employment shares, and size distributions come from the Small Business Administration Office of Advocacy Frequently Asked Questions publication, July 2024 edition [1]. Survival rates by cohort come from BLS Business Employment Dynamics, using establishment-age-and-survival tables for cohorts opened between 1994 and 2024 and observed through March 2025 [2]. Firm-condition indicators come from SBCS Reports on Employer Firms, drawing on the 2024 edition based on the 2023 survey cycle and the 2025 edition based on the 2024 survey cycle [5]. Cash-buffer distribution estimates come from the JPMorgan Chase Institute analysis of small-business deposit accounts during the initial weeks of the 2020 downturn [3]. Each source is publicly available at no cost and is used without modification other than aggregation for chart production.

Third, primary regulatory documentation supporting the two illustrative cases. Corporate Transparency Act implementation is documented through FinCEN public rule pages and Federal Register notices covering the January 2024 effective date, the December 2024 court injunction, and the March 2025 interim final rule exempting domestic reporting companies [18]. Section 174 research-expenditure treatment is documented through Internal Revenue Service Revenue Procedure 2023-08, Notice 2023-63, and Notice 2024-12. Section 174A restoration of immediate expensing for domestic research expenditures came through the July 2025 One Big Beautiful Bill Act, effective for tax years beginning after 31 December 2024, with retroactive election available to small taxpayers under the Section 448(c) threshold.

2. Framework construction procedure

Framework construction followed a three-stage inductive procedure.

Stage one drew on literature synthesis. Recurring decision-cycle terms in the reviewed managerial-accounting sources were grouped by the reversibility of the decisions they described. Terms clustered into three groups: high-reversibility activity where the next reconciliation cycle can correct an earlier entry (receipts, disbursements, reconciliations, filings); medium-reversibility activity where the next variance report or budget revision can adjust an earlier allocation (variance analysis, budgeting, working-capital management, cost analysis); and low-reversibility activity where correction requires structural change and material transition cost (pricing structure, capital allocation, entity structure, market entry or exit). Existing typologies including Anthony and Govindarajan's four responsibility-center classification [8] and Simons' four levers [6] were mapped onto the three reversibility groups; both typologies collapsed onto the medium- and low-reversibility groups and did not treat high-reversibility activity as a formal architectural component.

Stage two shifted from literature synthesis to instrumental-case analysis. The two regulatory-transition cases were selected to illustrate that regulatory signals may arrive on schedules asynchronous to the three reversibility groups and may affect all three simultaneously. Corporate Transparency Act reporting affected high-reversibility filing routines, medium-reversibility compliance-cost tracking, and low-reversibility entity-structuring decisions during the same fifteen-month window between January 2024 and March 2025. Section 174 treatment during 2022 through 2025 similarly cut across reversibility groups. Compliance monitoring therefore requires an architectural component that operates orthogonally to the three groups and connects to all of them simultaneously.

Stage three integrated stages one and two into a four-component architecture: three horizontal tiers organized by reversibility and connected by information flow, with a fourth component running vertically across all three, connecting external regulatory signals to tier-level adjustments. Naming convention followed acronym conflict-checking on "SAAM strategic accounting" and "SAAM management accounting" via Google Scholar and general web search. Existing uses of SAAM in machine-learning attention mechanisms and in veterinary computer-vision domains carry no risk of confusion with accounting-domain literature.

3. Choice of a three-plus-one structure

Choice of three horizontal tiers and one vertical component departs from four-lever [6] and four-perspective [7] precedents and rests on two considerations.

First, reversibility of the decisions themselves generates three natural groupings, as documented in stage one. High-reversibility activity can be corrected within the next operational cycle at negligible cost. Medium-reversibility activity can be adjusted within one to several months through revision of allocations, budgets, or working-capital positions. Low-reversibility activity requires structural change: an entity conversion, a pricing repositioning, a capital-structure decision, or a market entry or exit. Each group carries a distinct decision-support requirement.

Second, the compliance signal loop enters vertically because regulatory signals do not attach to any single reversibility group. Section 174 announcement in December 2017 affected low-reversibility decisions immediately (choice to capitalize software-development staff hiring in the United States versus abroad), medium-reversibility decisions from January 2022 (annual budget preparation for R&D-intensive lines), and high-reversibility decisions continuously thereafter (per-return tax filing entries). Methodological precedent for non-hierarchical architectural arrangement was discussed in Section 2.

4. Visualization and analytical tools

Descriptive statistics for Figure 1 and Tables 1 and 3 were computed in Python 3.11 with pandas 2.x and matplotlib 3.x, using the Agg non-interactive backend for reproducible PNG output. Source data were extracted directly from the primary agency publications named in Section 3.1, downloaded from the respective .gov and .org URLs in the reference list and cross-checked between reports for consistency. Extraction dates for each series are recorded in the caption of the figure or table in which the data appear. Figure 2 was constructed in matplotlib to maintain visual coherence with Figure 1 and uses the same color palette. Table 2 was constructed by decomposing each tier of the model into criteria observable at three maturity levels (Basic, Developing, Mature), with criteria selected on the basis that each must be verifiable through documentation available to an external accountant or auditor without proprietary information access.

5. Types of claim supported and not supported

Framework construction method supports three types of claim and does not support two.

Supported claims: logical coherence of SAAM with the reviewed strategic-management-accounting literature; correspondence of the compliance signal loop with independently documented regulatory transitions; diagnostic utility of the SAAM Maturity Diagnostic as an instrument for tier-level self-assessment.

Not supported claims: predictive validity of SAAM at the level of firm-outcome prediction; causal claims that firms adopting SAAM will outperform firms that do not. Both claim types require longitudinal empirical validation identified in Section 6 as a research direction.

Results

1. US small-business context

Descriptive statistics on US small businesses establish the empirical setting within which SAAM operates. Table 1 presents the size distribution of employer firms as a percentage share by employment class, drawing on Census Bureau data year 2021.

Table 1

Distribution of US employer firms by employment size, 2021.

Employment class	Share of employer firms
1–4 employees	49%
5–19 employees	27%
20–99 employees	8%
100–499 employees	1%
Payroll during year but not March 12 pay period	14%
Total	100%

Shares rounded to the nearest whole percent; total may differ from the sum of rows by up to one percentage point due to rounding. Absolute-number reference values (US Census 2021 / SBA FAQ 2024): total small employer firms 1–499 employees, 6,274,916; large firms

500+ employees, 19,688; average employment small firms, 11; average employment large firms, 3,302; total US nonemployer businesses, 28,477,518.

Source: Census Bureau, 2022 Annual Business Survey (data year 2021) and Statistics of U.S. Businesses 2021, as reported by the Small Business Administration Office of Advocacy [1]. Font: Times New Roman 11 pt.

Concentration within the 1–4 employee bracket is the setting to which SAAM directly applies: nearly half of US employer firms operate at a scale where the owner-manager and at most three additional workers perform every function. The 28,477,518 nonemployer businesses (81.9% of all US small businesses) operate at similar or smaller scale and fall within the scope conditions defined in Section 3.3, though the empirical distribution in Table 1 concerns employer firms specifically [1].

Figure 1 presents survival and cost-pressure indicators drawn from BLS Business Employment Dynamics and from SBCS.

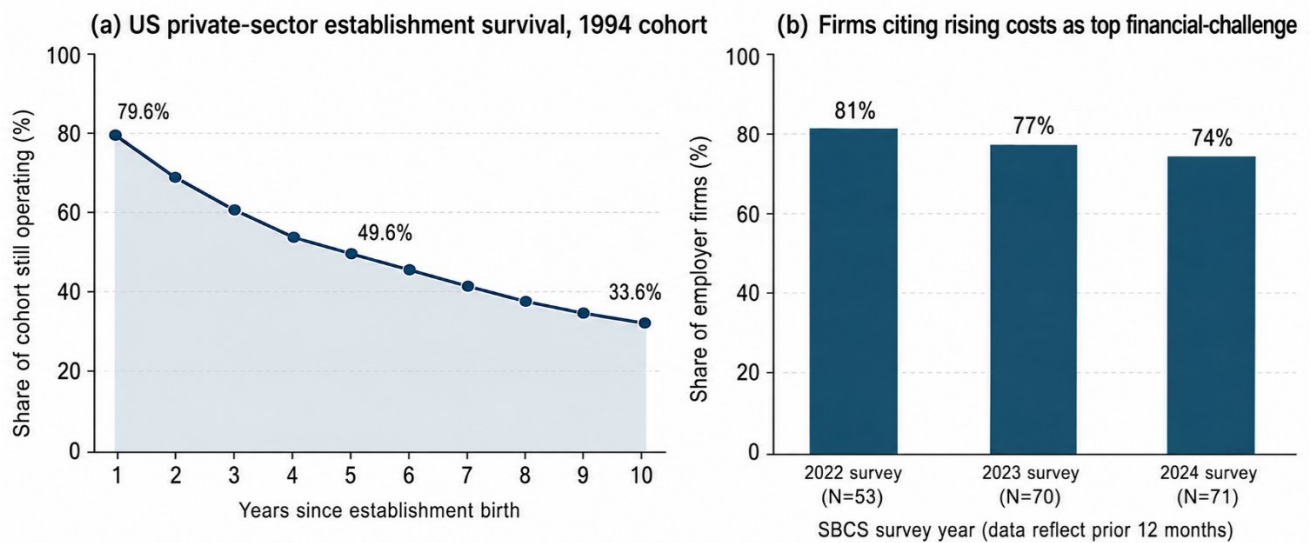


Figure 1. US small-business survival and cost-pressure indicators.

Panel (a) presents the survival trajectory of the 1994 birth cohort of US private-sector establishments, which is the earliest full-decade cohort in the BLS Business Employment Dynamics series. Its trajectory tracks closely to the multi-cohort average of 79% at year one, 49% at year five, and 34% at year ten (averaged across all cohorts opened 1994–2024 and observed through March 2025). Panel (b) presents the share of small employer firms citing rising costs of goods, services, or wages as the top financial challenge, by SBCS survey year.

Source: US Bureau of Labor Statistics Business Employment Dynamics Table 7 [2]; Federal Reserve Small Business Credit Survey Reports on Employer Firms, 2023, 2024, and 2025 editions [5]. Font: Times New Roman 11 pt.

Cash-position data complete the empirical picture. JPMorgan Chase Institute analysis of small-business deposit accounts reports a median cash buffer of roughly 27 days before February 2020, and the Bartik and colleagues survey of April 2020 recorded a median of about two weeks for firms with monthly expenses above ten thousand dollars [3; 4]. Notably, the 2024 SBCS was the first survey cycle since 2021 in which small employer firms were more likely to report revenue decreases than increases in the prior twelve months, marking a turn in the multi-year recovery trajectory [5]. Table 3 aggregates additional financial-condition indicators from the two most recent SBCS Reports on Employer Firms.

Table 3

Selected financial-condition indicators for US small employer firms, SBCS 2023 and 2024 survey cycles.

Indicator	2023 survey (2024 report)	2024 survey (2025 report)
Firms experiencing any financial or operational challenge	more than 9 in 10	approximately 9 in 10 (held steady)
Firms citing rising costs of goods, services, or wages as top financial challenge	77%	74%
Firms reporting supply-chain challenges	41% (down from 60% in 2022)	further decline reported
Firms with more than \$100,000 in outstanding debt	39% (up from 31% in 2019)	remained elevated
Revenue performance index	held steady, below prepandemic level	declined for second consecutive survey cycle
Firms citing higher interest rates as contributing to increased debt costs	more than half	indicator not updated in 2024 SBCS report

Source: Federal Reserve Small Business Credit Survey, 2024 and 2025 Reports on Employer Firms [5]. Sample sizes: 6,131 firms (2023 cycle); 7,653 firms (2024 cycle). All data in Tables 1 and 3 and in Figure 1 extracted November 2025. Font: Times New Roman 11 pt.

2. SAAM architecture

Figure 2 presents the SAAM artifact.

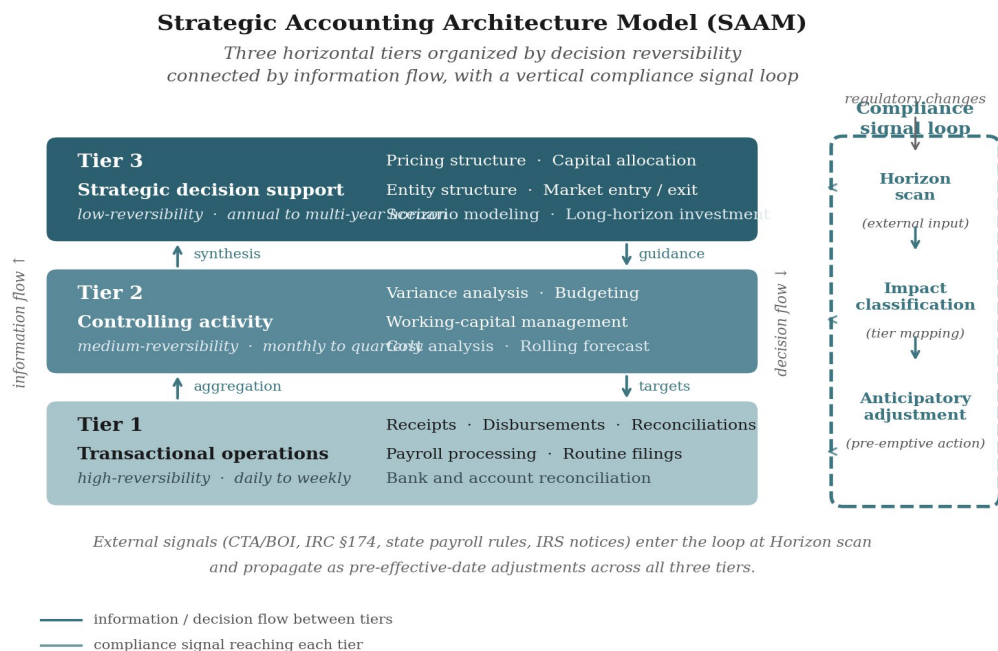


Figure 2. Strategic Accounting Architecture Model (SAAM): three horizontal tiers organized by decision reversibility and connected by information flow, with a vertical compliance signal loop of three functional elements (Horizon scan, Impact classification, Anticipatory adjustment) reaching each tier.

Source: Author's development, constructed in matplotlib 3.10. Font: Times New Roman 11 pt.

Three tiers correspond to high-reversibility, medium-reversibility, and low-reversibility decision activity, with content examples shown within each tier block in Figure 2. Tier 1 covers activity where the next reconciliation cycle can correct an earlier entry; decision horizon is daily to weekly. Tier 2 covers activity where the next variance report, budget revision, or working-capital adjustment can correct an earlier allocation; decision horizon is monthly to quarterly. Tier 3 covers activity where correction requires structural change and material transition cost; decision horizon is annual to multi-year.

Information flows upward between tiers, and decision flows downward, through four arrow types visible in Figure 2. Aggregation collapses transactional detail into monthly or quarterly summaries. Synthesis extracts trend and structural indicators from those summaries. Guidance transmits constraints and priorities from the strategic tier to the controlling tier. Targets translate those constraints into measurable transactional-tier goals.

The compliance signal loop enters vertically and consists of three functional elements. Horizon scan takes external regulatory documentation as input, monitoring Federal Register notices, IRS Notices and Revenue Procedures, state payroll and licensing rules, and industry-specific regulatory bulletins on a scheduled cadence. Impact classification maps each detected signal onto the tier or tiers affected: Tier 1 for filing and registration requirements, Tier 2 for cost and cash-flow impact, Tier 3 for structural or entity decisions. Anticipatory adjustment converts the classification into pre-effective-date changes in workflows, budgets, or entity structure, so that the firm is positioned before the effective date instead of reacting after it.

3. SAAM Maturity Diagnostic

Table 2 presents the SAAM Maturity Diagnostic. Each of the three tiers, together with compliance-loop integration as a separate row, is decomposed into criteria observable at three maturity levels: Basic, Developing, and Mature. Criteria are stated so that each is verifiable through documentation available to an external accountant or auditor without proprietary information access. Compliance-loop integration is presented as a separate row and not as a fourth tier, reflecting the loop's vertical position in the architecture.

Table 2

SAAM Maturity Diagnostic.

Component	Basic	Developing	Mature
Tier 1: Transactional operations	Books reconciled quarterly; payroll processed manually or via standalone service without general-ledger integration; tax filings prepared reactively at deadline	Books reconciled monthly; payroll integrated with accounting system; filings prepared from calendarized checklist	Books reconciled at least weekly for cash accounts; automated payroll with same-system general-ledger posting; filings prepared with independent review before submission
Tier 2: Controlling activity	Budget prepared annually as a single number; variance reviewed at year end; no rolling forecast	Budget by quarter with monthly variance report; working-capital position reviewed monthly; ad-hoc forecast prepared for major decisions	Rolling forecast maintained at least quarterly; standard variance thresholds trigger review; cost analysis available at product-line, service-line, or customer segment

Component	Basic	Developing	Mature
Tier 3: Strategic decision support	Strategic decisions made without documented financial analysis; entity structure not reviewed against current tax and liability considerations; pricing set by market comparison alone	Financial analysis prepared for major decisions; pricing reviewed annually; entity structure reviewed on tax-legislation change	Scenario modeling for multi-year decisions; pricing structure documented with margin logic; entity structure and capital allocation reviewed on scheduled cadence and on trigger events
Compliance signal loop integration (vertical)	No formalized regulatory monitoring; response is reactive after effective date	Regulatory monitoring assigned to external accountant on retainer; response initiated at effective date	Regulatory monitoring on scheduled cadence with documented tier-impact classification; pre-effective-date adjustment prepared and reviewed

Source: Author's development. Font: Times New Roman 11 pt.

A firm's maturity profile emerges as a joint vector across the four rows, with each row's value interpretable in the context of the others. Diagnostic use is not to produce a single composite score; the instrument identifies specific tiers and the compliance loop where the firm operates below its aspirations, and it flags misalignments between rows that limit the value of any single tier.

Discussion

1. Structural fit of a tiered architecture in the SME context

Existing strategic management-accounting frameworks organize their components on axes different from decision reversibility. Simons' four levers separate control by function (belief, boundary, diagnostic, interactive) [6]. Kaplan and Norton's four perspectives separate performance measurement by stakeholder view (financial, customer, internal process, learning and growth) [7]. Anthony and Govindarajan's responsibility centers separate accountability by financial-result type (revenue, expense, profit, investment) [8]. Cooper and Kaplan's activity-based costing organizes cost measurement by activity and resource consumption [16], again presupposing analytical granularity that owner-manager firms rarely sustain. Each axis has intellectual coherence within its parent framework. Application to owner-manager firms, however, encounters the same structural mismatch: axes assume that different people or units within the firm attend to different components. When one person attends to every component, the axis loses its organizational meaning.

Decision reversibility, by contrast, organizes accounting activity in a way that survives role compression. A single owner-manager who reconciles the bank statement on Friday, reviews the monthly variance on the tenth of the following month, and considers a change of entity structure at year-end operates on three different reversibility timescales. Each timescale requires different information, tolerates different lag, and rewards different investment in controls. SAAM exploits this natural organization: tier separation reflects properties of the decisions themselves, not properties of the organization performing them.

2. The compliance signal loop as distinctive contribution

Compliance signal loop is the model's principal novel component and requires separate discussion. Existing frameworks treat compliance as an external constraint on strategy [6; 7] or as a routine service that occupies accountant time [10]. Neither treatment integrates compliance monitoring into the architectural design.

Two US regulatory transitions during 2022–2025 illustrate why integration matters. Corporate Transparency Act came into effect on 1 January 2024 and required an estimated thirty-two million entities to file beneficial-ownership information reports with FinCEN, with civil penalties of up to \$591 per day at the inflation-adjusted 2024 rate and criminal exposure for wilful non-compliance. A federal court injunction in December 2024 suspended the requirement, and on 21 March 2025 FinCEN issued an interim final rule exempting domestic reporting companies entirely, reducing the population of reporting entities from an estimated thirty-two million to under twelve thousand foreign entities [18]. Firms that had allocated staff time, external counsel fees, and software subscriptions to compliance during the fifteen-month effective window recovered no portion of that investment.

Section 174 research-expenditure treatment introduced under the 2017 Tax Cuts and Jobs Act was enacted in December 2017 and took effect for tax years beginning after 31 December 2021, requiring capitalization and five-year amortization of domestic research expenditures and fifteen-year amortization for foreign research. Four-year runway between enactment and effective date affected Tier 3 decisions during 2018–2021 (whether to relocate software-development activity abroad, whether to restructure R&D-heavy operations), Tier 2 decisions from January 2022 (annual budget preparation for R&D-intensive lines and cash-flow projection under the deferred deduction), and Tier 1 filings continuously thereafter. In July 2025, the One Big Beautiful Bill Act enacted Section 174A, restoring immediate expensing of domestic research expenditures for tax years beginning after 31 December 2024 for all taxpayers, and permitted small taxpayers under the Section 448(c) threshold to elect retroactive amendment of 2022–2024 returns.

Both cases exhibit a common structural feature: substantial compliance investment during an effective period, followed by regulatory reversal. Whether such reversals recur at higher frequency than in the past is beyond the scope of the article; the compliance signal loop responds to both persistent and reversed regulations symmetrically. A firm operating without systematic Horizon scan discovers a new obligation only when a filing deadline approaches. Impact classification, absent, defaults to the transactional tier and misses the strategic implications for entity structure and staffing location. Anticipatory adjustment, absent, cannot occur. In operational terms, Horizon scan would have surfaced the enabling legislation for both cases years before their effective dates through routine monitoring of Federal Register and IRS Notice releases; Impact classification would have flagged Tier 3 exposure (staffing location, entity structure); Anticipatory adjustment would have prepared workflow and budget changes before the January 2022 (Section 174) and January 2024 (CTA) effective dates. SAAM's loop does not reverse the economics of a specific regime change; it shortens the reaction lag in both directions. In the CTA case, firms without systematic monitoring absorbed compliance costs during the effective window; firms with earlier detection incurred the same period-cost but shortened the exposure window through faster response to the March 2025 reversal. In the Section 174 case, firms without monitoring missed the retroactive-amendment window in 2025; firms with monitoring captured refund opportunities during that window.

3. Placement of Wiklund and Shepherd's configurational logic

The configurational-fit finding of Wiklund and Shepherd [19] provides methodological precedent for SAAM's non-hierarchical structure. Their result on 413 Swedish small businesses established that entrepreneurial orientation predicts performance through interaction with environmental dynamism and capital access, with a three-way interaction stronger than any single main effect. Translated to accounting-function design, this result implies that the value of any single tier depends on the concurrent maturity of other tiers and of the compliance loop. A firm at Tier 3 Mature with Tier 1 Basic loses much of the Tier 3 benefit because low-quality transactional data corrupt Tier 2 inputs, which then corrupt Tier 3 analysis. The Maturity

Diagnostic in Table 2 was designed with this dependency in mind; it presents four rows as a joint profile, not as independent scores.

4. Practical positioning

SAAM was constructed as a general model for owner-manager firms below fifty employees and ten million dollars in annual revenue. Two adjacent applications of the model could extend it to specific contexts: (1) digital transformation of accounting processes in US trucking, instantiating Tier 1 and Tier 2 of SAAM in a specific industry vertical with QuickBooks-centric workflow, per-load profitability tracking, and Federal Motor Carrier Safety Administration compliance touchpoints; and (2) liquidity governance as an expansion of Tier 2 output with rolling forecast methodology, early-warning indicators, and cash-position management.

5. Limitations and scope conditions

Three limitations bound the present contribution. First, diagnostic-utility claim rests on face validity and construct logic; predictive and causal validity require longitudinal panel data at the small-firm level and are not established here. Second, both regulatory-transition cases are US-specific; extension to other jurisdictions requires adaptation of the compliance-signal-loop content, though the loop structure is portable. Third, SAAM applies to owner-manager firms; firms with formal controllership functions above the fifty-employee threshold face different structural constraints, and existing SMA frameworks retain their applicability at that scale.

Conclusions

SAAM answers a persistent gap in the way managerial accounting is designed for owner-manager firms. Foundational strategic management-accounting frameworks assume organizational scale that these firms do not possess, and empirical small-firm accounting research documents technique-by-technique adoption without composing an architectural view. Three horizontal tiers organized by decision reversibility (transactional, controlling, strategic decision support) and a vertical compliance signal loop with three functional elements (Horizon scan, Impact classification, Anticipatory adjustment) together constitute the architecture proposed in this article.

Three original contributions accompany the architecture itself. Compliance signal loop treatment differs from prior frameworks by positioning regulatory-regime change as a continuously monitored input to accounting-function design and not as a periodic external shock; two US transitions between 2022 and 2025 (Corporate Transparency Act beneficial-ownership reporting and Section 174 research-expenditure treatment) illustrate the loop's operating logic in a domestic setting. Reversibility-based tier organization survives role compression in ways that function-based and stakeholder-based axes do not. SAAM Maturity Diagnostic operationalizes each tier and the loop at three maturity levels, providing owner-managers and their accountants with a shared instrument for assessing where the firm stands and where improvement effort will produce return.

Practical value follows from the diagnostic's design. Small-firm accountants working in external advisory roles can apply the four-row profile during onboarding, at annual planning cycles, and after material regulatory-regime changes. Joint-vector interpretation identifies the weakest component as well as misalignments between components that limit the value of any single tier, and each criterion is verifiable from documentation the accountant already collects during compliance work.

Four research directions extend the present contribution. First, reliability testing of the SAAM Maturity Diagnostic on a sample of external accountants would establish inter-rater agreement for the four-row profile and would identify criteria that require sharper operationalization. Second, development of compliance-signal-loop content libraries specific to individual US industries with distinctive regulatory contexts (healthcare firms subject to

HIPAA and CMS reporting, food service firms subject to FDA and state health-department rules, financial-service firms subject to state licensing and federal AML obligations) would translate the general Horizon-scan element into a searchable and machine-readable input catalog. Third, integration of SAAM with commercial accounting-tool ecosystems (QuickBooks, Xero, NetSuite) at the small-business scale would translate the maturity criteria into automatable checks and would clarify which criteria depend on tool selection and which on process design. Fourth, adaptation of the architecture for firms transitioning across scope-condition boundaries (crossing the fifty-employee threshold, preparing for acquisition, absorbing subsidiaries) would specify how SAAM interfaces with more formal control systems appropriate to larger firms.

Author's Contribution

The tier structure of SAAM is an original artifact developed by the author. Its construction proceeded inductively from decision-cycle terms in the reviewed managerial-accounting literature (see Methods, Stage 1). Anthony and Govindarajan's four responsibility-center classification [8] and Simons' four levers [6] were mapped onto this structure without covering the transactional layer as a formal component. The compliance signal loop and its three functional elements (Horizon scan, Impact classification, Anticipatory adjustment) are original contributions of the author and do not appear in existing strategic-management-accounting frameworks reviewed in Section 2. The SAAM Maturity Diagnostic in Table 2 is an original diagnostic instrument constructed by the author through iterative decomposition of tier definitions into observable maturity criteria at three levels. Case selection of the two US regulatory transitions (Corporate Transparency Act and Section 174) was made by the author to demonstrate the loop's operating logic in publicly documented settings without recourse to proprietary client information.

References

1. U.S. Small Business Administration, Office of Advocacy. Frequently Asked Questions About Small Business. Washington, DC: SBA, July 2024. Available at: <https://advocacy.sba.gov/2024/07/23/frequently-asked-questions-about-small-business-2024/>
2. U.S. Bureau of Labor Statistics. Business Employment Dynamics: Establishment Age and Survival Data. Table 7. Survival of private sector establishments by opening year. Washington, DC: BLS, 2025. Landing page: <https://www.bls.gov/bdm/bdmage.htm>. Data table: https://www.bls.gov/bdm/us_age_naics_00_table7.txt
3. Farrell, D., Wheat, C., & Mac, C. Small Business Financial Outcomes during the Onset of COVID-19. JPMorgan Chase Institute, 2020. Available at: <https://www.jpmorganchase.com/institute/all-topics/business-growth-and-entrepreneurship/small-business-financial-outcomes-during-the-onset-of-covid-19>
4. Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, 2020, Vol. 117, No. 30, pp. 17656–17666. DOI: 10.1073/pnas.2006991117
5. Federal Reserve Banks. Small Business Credit Survey: Report on Employer Firms. 2024 edition (based on 2023 survey cycle) and 2025 edition (based on 2024 survey cycle). Federal Reserve Banks, 2024 and 2025. 2024 edition DOI: 10.55350/sbcs-20240307. Available at: <https://www.fedsmallbusiness.org/reports/survey/2024/2024-report-on-employer-firms> and <https://www.fedsmallbusiness.org/reports/survey/2025/2025-report-on-employer-firms>
6. Simons, R. *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*. Boston: Harvard Business School Press, 1995.
7. Kaplan, R. S., & Norton, D. P. *The Balanced Scorecard: Translating Strategy into Action*. Boston: Harvard Business School Press, 1996. ISBN 978-0-87584-651-4.

8. Anthony, R. N., & Govindarajan, V. *Management Control Systems*. 12th ed. Boston: McGraw-Hill/Irwin, 2007.
9. Institute of Management Accountants. *Statement on Management Accounting: Definition of Management Accounting*. Montvale, NJ: IMA, 2008.
10. Marriott, N., & Marriott, P. Professional accountants and the development of a management accounting service for the small firm: barriers and possibilities. *Management Accounting Research*, 2000, Vol. 11, No. 4, pp. 475–492. DOI: 10.1006/mare.2000.0142
11. Halabi, A. K., Barrett, R., & Dyt, R. Understanding financial information used to assess small firm performance: An Australian qualitative study. *Qualitative Research in Accounting & Management*, 2010, Vol. 7, No. 2, pp. 163–179. DOI: 10.1108/11766091011050840
12. Lucas, M., Prowle, M., & Lowth, G. Management accounting practices of (UK) small-medium-sized enterprises: Improving SME performance through management accounting education. *CIMA Research Executive Summary Series*, 2013, Vol. 9, No. 4, pp. 1–13.
13. Malagueño, R., López-Valeiras, E., & Gomez-Conde, J. Balanced scorecard in SMEs: effects on innovation and financial performance. *Small Business Economics*, 2018, Vol. 51, No. 1, pp. 221–244. DOI: 10.1007/s11187-017-9921-3
14. Bourletidis, K., & Triantafyllopoulos, Y. SMEs Survival in Time of Crisis: Strategies, Tactics and Commercial Success Stories. *Procedia, Social and Behavioral Sciences*, 2014, Vol. 148, pp. 639–644. DOI: 10.1016/j.sbspro.2014.07.092
15. Storey, D. J., & Greene, F. J. *Small Business and Entrepreneurship*. Harlow: Financial Times Prentice Hall, 2010. ISBN 978-0-273-69347-5.
16. Cooper, R., & Kaplan, R. S. Measure costs right: make the right decisions. *Harvard Business Review*, 1988, Vol. 66, No. 5, pp. 96–103.
17. Association of International Certified Professional Accountants (AICPA & CIMA). *Global Management Accounting Principles*, 2nd edition. London and New York: AICPA & CIMA, 2023. Second-edition summary available at: <https://www.fmmagazine.com/news/2024/jan/gmap-2-0-revised-guidance-for-a-rapidly-changing-world/>
18. Financial Crimes Enforcement Network (FinCEN). Beneficial Ownership Information Reporting Requirements under the Corporate Transparency Act, including implementation of the January 2024 effective date and the March 2025 interim final rule exempting domestic reporting companies (Federal Register, Vol. 90, 26 March 2025, "Beneficial Ownership Information Reporting Requirement Revision and Deadline Extension"). U.S. Department of the Treasury, 2024–2025. Available at: <https://www.fincen.gov/boi> and <https://www.federalregister.gov/documents/2025/03/26/2025-05199/beneficial-ownership-information-reporting-requirement-revision-and-deadline-extension>
19. Wiklund, J., & Shepherd, D. Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 2005, Vol. 20, No. 1, pp. 71–91. DOI: 10.1016/j.jbusvent.2004.01.001
20. Grant, M. J., & Booth, A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, 2009, Vol. 26, No. 2, pp. 91–108. DOI: 10.1111/j.1471-1842.2009.00848.x