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Deferred Tax Accounting in the Banking Sector: A Literature Review

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Abstract

This paper reviews the literature on deferred taxation in the banking sector, with a particular focus on Deferred Tax Assets (DTAs) and Deferred Tax Credits (DTCs). Drawing on research in accounting for income taxes (AFIT), transparency and disclosure, banking regulation, and fiscal policy, it synthesizes theoretical and empirical insights into an integrated perspective. The literature highlights the significance of DTAs, especially those arising from temporary book-tax differences through loan loss provisions, for banks' regulatory capital. The conversion of DTAs into DTCs, as exemplified by the Greek case, provides short-term solvency relief but generates long-term fiscal risks and reinforces the sovereign-bank nexus. By linking AFIT theory with the ongoing debate on DTAs and DTCs, the paper develops a unified conceptual framework, identifies research gaps, and underscores the broader fiscal implications.

Keywords

Deferred Tax Assets, Deferred Tax Credits, AFIT, Banking Regulation, Transparency, Sovereign-Bank Nexus

1. Introduction

The concept of deferred taxation has become increasingly central in banking literature and practice, particularly since the global financial crisis and the Eurozone sovereign debt crisis. Banks faced unprecedented loan losses and restructuring costs that generated substantial **Deferred Tax Assets (DTAs)**. By definition, DTAs arise from temporary differences between accounting income and taxable income, and their realizability depends on the ability of banks to generate sufficient future profits (Graham et al., 2014; Van Breda & Ferris, 1989). A Deferred Tax Credit (DTC) refers to a deferred tax asset that is automatically transformed into a claim

on the sovereign, typically through a statutory guarantee. Unlike a DTA, which depends on the bank's future profitability for realization, a DTC constitutes an irrevocable and unconditional right to offset or recover taxes from the state. This legal distinction ensures its full eligibility as regulatory capital under prudential frameworks such as the CRR. This conditional nature has raised important theoretical and policy debates about their credibility, transparency, and role within bank capital structures.

At the same time, regulatory and prudential authorities have highlighted the limitations of DTAs as components of loss-absorbing capital. Under **IAS 12**, recognition of DTAs requires "probable" taxable profits (IFRS Foundation, 2010), embedding forward-looking assumptions into accounting statements. Yet the **Basel III framework** and the **Capital Requirements Regulation (CRR)** emphasize that DTAs reliant on future profitability should be deducted from Common Equity Tier 1 (CET1) capital, as they do not provide immediate solvency support (Basel Committee on Banking Supervision, 2011; CRR, 2013 (Art. 36)). This tension between accounting recognition and prudential conservatism lies at the core of contemporary discussions on deferred taxation.

The Eurozone crisis further transformed the debate by introducing **Deferred Tax Credit (DTC) mechanisms**, especially in Greece, which automatically convert DTAs into irrevocable state-guaranteed claims (Law 4172, 2013; Law 4303, 2014; Law 4465, 2017). While these instruments restore the regulatory value of DTAs by ensuring their eligibility as CET1, they also shift risk from banks to sovereigns, embedding contingent liabilities into public finances (Acharya et al., 2014; Merler & Pisani-Ferry, 2012). In this way, DTCs highlight the intersection of accounting, regulation, and fiscal policy, and exemplify the **sovereign-bank nexus** that has been central to systemic fragility in Europe (Farhi & Tirole, 2018).

Against this background, the academic literature has analyzed deferred taxation from multiple perspectives. Studies in accounting focus on the theoretical framework of Accounting for Income Taxes (AFIT) and the categorization of book-tax differences (McGill & Outslay, 2002; Tang, 2015; Ozili et al., 2017). Banking research emphasizes the role of loan loss provisions in generating DTAs and the implications for capital management and earnings quality (Ahmed et al., 1999; Rigotti et al., 2016). Regulatory studies examine prudential filters under Basel III and CRR (ECB, 2021), while fiscal analyses underline the contingent liabilities and sovereign exposure created by DTC frameworks (IMF, 2020; European Commission, 2021).

The aim of this article is to **review this literature systematically** and to identify gaps for future research. Specifically, it seeks to:

1) Analyze the accounting foundations of DTAs within the AFIT framework,
2) Assess their role in transparency and market discipline,
3) Examine their prudential treatment and regulatory credibility,
4) Evaluate the fiscal implications of DTCs, and
5) Highlight the sovereign-bank nexus as a key dimension of systemic risk.

By synthesizing these strands, the paper positions deferred taxation not as a technical afterthought in financial reporting, but as a **pivotal issue at the intersection of accounting, banking regulation, and fiscal sustainability**.

Our study proceeds as follows: In the next section we present analytically the thematic categories in deferred tax accounting. Next, the research gaps and future directions are outlined and the last section concludes the paper.

2. Thematic Categories in Deferred Tax Accounting in Banking

As outlined in the introduction, the literature review is organized into five thematic categories, which are summarized in Table 1 in the Appendix and discussed in detail below. From a methodological perspective, the literature reviewed in this study was identified through searches in Scopus, Web of Science, and SSRN databases using combinations of the keywords "deferred tax," "deferred tax assets," "deferred tax credits," "banking," "Basel III," "CRR," and "sovereign-bank nexus." The inclusion period covered 1990-2024 to capture both pre- and post-crisis developments in deferred tax accounting. Articles, working papers, and policy reports were screened for relevance to the banking sector, regulatory capital, and fiscal implications. Studies focusing on manufacturing or non-financial firms were excluded. The final corpus included peer-reviewed articles and institutional documents forming the analytical base for the five thematic categories presented below.

Table 1. Summary of key thematic categories in deferred tax accounting in banking.

Thematic Category	Key Studies	Main Contribution
1) Accounting for income taxes (AFIT)	1) Graham et al. (2014) 2) Van Breda & Ferris (1989) 3) McGill & Outslay (2002)	Foundation of accounting recognition of DTAs, distinction between temporary/permanent differences
	1) Ahmed et al. (1999) 2) Dziobek (1996) 3) Rigotti et al. (2016) 4) Ozili et al. (2017) 5) Lazar & Andries (2021)	Link between LLPs and DTA creation, capital management, tax treatment
2) Transparency and Information	1) Beatty & Liao (2014) 2) Bischof & Daske (2013) 3) Bischof et al. (2021) 4) Flannery et al. (2004)	Information asymmetry, bank opacity, disclosure effects
	1) Diamond (1984) 2) Diamond & Dybvig (1983) 3) Boyd & Prescott (1986) 4) Calomiris & Gorton (1991)	Delegated monitoring, bank runs, information asymmetry

Continued

3) Tax Positioning	1) Riahi-Belkaoui (2004) 2) Tang (2015) 3) Cloyd et al. (1996) 4) Frank et al. (2009) 5) Sandmo (2005)	Tax compliance, avoidance, evasion, book-tax conformity
4) Capital & Prudential Regulation	1) Basel Committee on Banking Supervision (2011) 2) CRR (2013) (Art. 36) 3) ECB (2021) 4) Skinner (2008) 5) Hanna & Shaw (2019)	DTA deduction from CET1, exceptions for sovereign guarantees, Japanese experience
	1) Law 4172 (2013) 2) Law 4303 (2014) 3) Law 4465 (2017)	Conversion of DTAs to DTCs with state guarantee, Article 27A
5) Fiscal Risk and Nexus	1) Acharya et al. (2014) 2) Merler & Pisani-Ferry (2012) 3) Farhi & Tirole (2018) 4) IMF (2020) 5) European Commission (2021)	Sovereign-bank nexus, contingent liabilities, doom loop

2.1. Theoretical Background: Accounting for Income Taxes (AFIT)

Accounting for Income Taxes (AFIT) constitutes the theoretical foundation for understanding the creation, recognition, and role of deferred tax balances in financial reporting. At the core of AFIT lies the observation that the rules and principles underpinning financial reporting under generally accepted accounting principles (GAAP) differ substantially from those used in income tax reporting. These divergences produce two distinct measures of income—book income and taxable income—as well as differences in the valuation of assets, liabilities, and equity. Such discrepancies, known as book-tax differences (BTDs), often arise because tax legislation mandates departures from GAAP reporting for economic, social, political, or administrative purposes (Graham et al., 2014). To address these mismatches, firms are required to establish a "Deferred Income Tax" account, which reconciles income tax expense reported in financial statements with income tax actually payable (McGill & Outslay, 2002).

BTDs are conventionally divided into permanent and temporary categories. Permanent differences reflect items of revenue or expense that appear in accounting income but never in taxable income, and vice versa. They are not expected to reverse and therefore do not create deferred tax balances (Van Breda & Ferris, 1989). Temporary differences, by contrast, arise when revenues or expenses are recognized in different periods for financial reporting and tax purposes. By definition, these timing differences eventually reverse: as assets are recovered or liabilities are settled, the differences between book and tax bases are eliminated. The

key accounting challenge, therefore, is to determine whether it is probable that deferred amounts will indeed be recovered or settled. This requirement places an emphasis on management judgment regarding the future profitability of the firm and the realizability of deferred tax assets (Graham et al., 2012).

Within the banking sector, specific categories of temporary differences have particular significance. Depreciation of assets frequently generates large deferred tax liabilities (Tang, 2015), whereas loan loss provisions (LLPs) and write-offs tend to create substantial deferred tax assets (Ozili et al., 2017). The role of LLPs has been highlighted in several studies as a principal source of DTAs in banks' balance sheets (Dziobek, 1996; Ahmed et al., 1999; Rigotti et al., 2016). In periods of heightened credit risk, banks increase their provisioning, which not only reduces accounting income but also produces deductible temporary differences under tax rules. The result is an expansion of DTAs precisely at the time when profitability is under pressure, thus raising questions about the quality and sustainability of these assets.

The recognition of DTAs is further governed by International Accounting Standard (IAS) 12, which requires that "a deferred tax asset shall be recognized for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized" (IAS 12.24) (IFRS Foundation, 2010). This rule embeds a forward-looking element into the recognition process: DTAs are recorded not merely because deductible differences exist, but because future profitability is expected to allow their utilization. In practice, this means that DTAs function as accounting representations of anticipated fiscal relief, contingent upon conditions that may or may not materialize.

This duality has important implications. On the one hand, DTAs offer a way to smooth tax liabilities over time, reflecting the intertemporal nature of taxation. On the other, their dependence on uncertain projections of taxable income makes them vulnerable to economic downturns, when profits are weakest and the probability of realization is lowest. For banks, this tension is particularly acute: just as credit losses mount and LLPs generate new DTAs, profitability erodes, undermining the likelihood that these assets can be realized.

In this way, AFIT theory highlights the inherent fragility of DTAs. They emerge naturally from the structure of financial reporting and tax law, but their recognition is conditional, judgment-driven, and forward-looking. As such, DTAs are not merely technical accounting entries but indicators of broader dynamics linking financial reporting, taxation, and expectations of future performance. This recognition provides the conceptual bridge to the regulatory debates that followed the global financial and Eurozone crises, where the prudential value of DTAs—and eventually their conversion into Deferred Tax Credits (DTCs)—became central to discussions of bank capital adequacy and fiscal sustainability.

2.2. Banks, Information Asymmetry, and Transparency

The central role of banks in modern economies has long been linked to their func-

tion as delegated monitors. Asymmetric information between borrowers and lenders generates agency problems that banks are uniquely positioned to mitigate. Through superior monitoring of borrowers, screening of projects, and verification of contractual obligations, banks reduce credit risk and provide information to depositors and investors that would otherwise be costly or unavailable (Boyd & Prescott, 1986; Diamond, 1984). This delegated monitoring role helps explain why banks maintain loan exposures on their balance sheets, despite the associated risks of non-performing loans (NPLs) and potential runs (Freixas and Rochet, 2008).

However, the very same monitoring function creates agency problems between bank managers and external stakeholders. Depositors and investors cannot easily observe the quality of banks' monitoring, nor can they accurately value opaque balance sheets. The inability of outsiders to assess bank portfolios—combined with the transformation of short-term liabilities into long-term illiquid assets—makes banks inherently vulnerable to runs and panics (Diamond & Dybvig, 1983; Flannery et al., 2004; Acharya, 2009). Empirical evidence suggests that depositors, when uncertain about the solvency of banks, may withdraw funds indiscriminately, creating systemic crises (Calomiris & Gorton, 1991). This highlights the importance of credible and timely accounting information in limiting panic and fostering confidence in the banking system.

Transparency, however, is not always unambiguously beneficial. Beatty & Liao (2014) argue that banks may be optimally opaque, precisely because they issue short-term debt designed to function as "money-like" instruments. To preserve the information-insensitivity of bank liabilities, excessive disclosure about risky assets can undermine confidence, increase rollover risk, and reduce efficiency in the use of bank debt as a medium of exchange. In this view, heightened transparency can be destabilizing when creditors are prone to react strongly to negative signals. This theoretical ambiguity frames the ongoing policy debate about the optimal level of bank disclosure.

The global financial crisis underscored the importance of transparency in risk reporting. Bischof et al. (2021) show that banks' disclosures of exposures and loan losses during 2007-2009 were often delayed, incomplete, and inconsistent with market expectations, thereby weakening market discipline and slowing corrective action. Similarly, Bischof & Daske (2013) demonstrate that mandatory disclosure, such as the European bank stress tests, can improve market liquidity when complemented by voluntary reporting but may exacerbate adverse selection if banks withhold further information. These findings underscore that disclosure regimes matter not only for regulatory compliance but also for shaping investor perceptions and financial stability outcomes.

In the specific case of deferred taxation, transparency assumes an added dimension. Deferred Tax Assets (DTAs) signal future tax relief but are conditional on profitability, which is inherently uncertain during crises. As such, large reported DTAs may be interpreted either as indicators of resilience (by reflecting loss-absorbing capacity through tax carryforwards) or as signs of fragility (by highlight-

ing accumulated losses and dependence on uncertain future profits). The subsequent transformation of DTAs into Deferred Tax Credits (DTCs) in jurisdictions such as Greece further complicates the transparency question. While disclosures formally present these instruments as part of Common Equity Tier 1 (CET1), their reliance on sovereign guarantees introduces fiscal risk and creates asymmetries in how different stakeholders—regulators, markets, taxpayers—interpret the quality of bank capital (Basel Committee on Banking Supervision, 2011).

Taken together, the literature suggests that the interplay between information asymmetry, delegated monitoring, and disclosure is central to understanding the banking sector. Transparency can reduce uncertainty and mitigate panics, but excessive or poorly designed disclosures may destabilize expectations. In the domain of deferred taxation, the disclosure of DTAs and DTCs embodies this tension: they provide regulatory compliance on paper but raise fundamental questions about the credibility, comparability, and substance of bank capital.

2.3. Financial Accounting Choices and Tax Positioning

The intersection of financial accounting and taxation is shaped by the strategic choices of firms. For banks in particular, the alignment—or misalignment—between accounting standards and tax rules generates significant discretion in reporting, with implications for both compliance and capital management.

Tax compliance has been conceptualized as a social contract between taxpayers and the state. Riahi-Belkaoui (2004) defines it as the decision to comply with tax laws and regulations in a timely manner, motivated by the expectation that the state will provide conditions that protect human dignity, fairness, and social order. Empirical work suggests that compliance is influenced by a mixture of economic factors, such as market development and competition, and non-economic factors, such as education, fairness perceptions, and cultural norms. Conversely, complexity in the tax system and low trust in government are associated with higher levels of non-compliance (Riahi-Belkaoui, 2004; Dykxhoorn & Sinning, 2010).

Tax planning and avoidance represent the legal strategies firms use to reduce tax liabilities. Cloyd et al. (1996) argue that managers may exploit conformity between financial and tax reporting methods to support aggressive tax positions, thereby increasing the likelihood of defending them successfully if challenged by tax authorities. In contrast, Tang (2015) finds that conformity is associated with lower levels of earnings management and tax avoidance, implying that tighter links between financial and tax reporting can restrain opportunistic behavior. More broadly, Graham et al. (2011) highlight that AFIT considerations significantly affect multinational firms' decisions, including investment location and profit repatriation.

The literature distinguishes between different forms of avoidance. Frank et al. (2009) document a strong positive relationship between financial reporting aggressiveness and tax reporting aggressiveness, facilitated by the nonconformity of

accounting and tax rules. Ljungqvist et al. (2017) further show that tax changes influence firms' risk-taking behavior, while Dyreng & Maydew (2017) emphasize the role of mandated disclosure as a reputational mechanism that may constrain tax avoidance.

Tax evasion, by contrast, refers to illegal actions to conceal or misrepresent taxable income. As Sandmo (2005) and Gemmell & Hasseldine (2012) note, evasion involves underreporting income, inflating deductions, or using offshore accounts. Literature identifies demographic, cultural, legal, and economic determinants of evasion, with Khlif & Achek (2015) providing a synthesis that highlights the multi-dimensional drivers of this behavior.

Among financial accounting choices, **loan loss provisions (LLPs)** stand out as the most significant driver of deferred tax assets in banks. LLPs reflect expected credit losses, but their tax deductibility is often restricted or delayed. As a result, banks accumulate DTAs when provisions exceed amounts recognized for tax purposes. This dual role of LLPs—as both a prudential buffer and a tax-relevant entry—has been extensively studied. Dziobek (1996) highlighted their importance for capital adequacy and tax treatment, while Ahmed et al. (1999) demonstrated that LLPs are often used for capital management rather than earnings management. More recent work by Rigotti et al. (2016) and Lazar & Andries (2021) shows that tax treatment of LLPs varies across jurisdictions, with implications for banks' effective tax rates and capital structures.

The **valuation of tax-related disclosures during crises** further complicates this picture. Investors' perception of DTAs depends not only on their technical recognition under accounting rules but also on confidence in banks' ability to generate taxable profits. Beatty & Liao (2014) caution that market participants may react negatively to discretionary provisioning in the post-Basel regime, interpreting it as a reduction in Tier 1 capital. This illustrates that the informational content of LLPs and related DTAs varies over time and across regulatory contexts, with implications for how markets interpret banks' tax positions during periods of financial stress.

In sum, the literature on financial accounting choices and tax positioning highlights the tension between compliance, discretion, and credibility. Tax planning and avoidance shape banks' reported outcomes within legal boundaries, while loan loss provisions represent the main accounting mechanism that generates DTAs. During crises, however, the valuation of these tax-related entries is contingent on investor confidence and regulatory interpretation, underscoring the fragile balance between transparency and opportunism in bank taxation.

2.4. DTAs as Regulatory Capital

The recognition of Deferred Tax Assets (DTAs) is governed by **IAS 12**, which stipulates that a DTA may only be recognized for deductible temporary differences "to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilized" (IFRS Foundation,

2010). This principle underscores the conditional nature of DTAs: their realizability depends on future profitability, a factor that becomes highly uncertain during crises. In practice, this creates tension between accounting recognition and prudential regulation, as banks are often most reliant on DTAs precisely when their capacity to generate taxable income is weakest.

From a regulatory perspective, **Basel III and the EU Capital Requirements Regulation (CRR)** are explicit: "Deferred tax assets that rely on future profitability and arise from temporary differences shall be deducted from Common Equity Tier 1 (CET1) items" ((CRR, 2013) Article 36(1)(c)). The rationale is that DTAs lack genuine **loss-absorbing capacity**—they represent anticipated tax relief rather than tangible capital available to absorb unexpected shocks. Nevertheless, Article 39 of the CRR provides an exception: if DTAs are not reliant on future profitability or are guaranteed by a sovereign, they may be recognized in CET1. Greece made extensive use of this flexibility through **Laws 4172/2013, 4303/2014, and 4465/2017**, which institutionalized the conversion of DTAs into **Deferred Tax Credits (DTCs)** with explicit state guarantees.

This transformation allowed Greek banks to include large stocks of DTCs as CET1 capital, ensuring compliance with regulatory ratios despite persistent losses. For example, evidence shows that DTCs constitute a material share of reported CET1 in systemic banks, while for Attica Bank, they have represented as much as 88% of its CET1. This reliance highlights both the stabilizing and distorting effects of DTCs. On one hand, they provide immediate regulatory relief and enable banks to withstand adverse shocks without breaching capital thresholds. On the other hand, they create **contingent liabilities for the sovereign**, transferring the risk of non-realization from banks to taxpayers. As noted, large-scale activation of Article 27A could transform these latent exposures into immediate fiscal obligations, thereby deepening the sovereign-bank nexus.

International experience reinforces these concerns. In Japan, regulators allowed banks to count large DTAs as capital during the late 1990s and early 2000s. While this avoided immediate breaches of solvency requirements, cases such as Resona Bank (in 2003, the Bank faced significant financial challenges, leading to a government bailout and restructuring) highlighted the fragility of relying on DTAs for solvency (Skinner, 2008). Similarly, Hanna & Shaw (2019) found that markets reassessed the value of US banks' DTAs after the global financial crisis, discounting them heavily due to uncertainty about future profitability. These examples underline that although DTAs can serve as regulatory buffers in times of stress, they do not enhance the fundamental earning capacity of banks and may even become signals of weakness.

The Greek DTC framework thus illustrates the trade-offs embedded in the regulatory treatment of deferred taxation. While it strengthens CET1 ratios on paper, it does so by embedding fiscal risk into bank capital structures. This blurs the line between high-quality capital, such as paid-in equity, and instruments reliant on sovereign support. Supervisors, including the ECB (2021), have expressed concern

over the high share of DTCs in CET1 and the opacity of related disclosures, warning that such reliance undermines the credibility of regulatory capital and may create cliff effects when transitional arrangements expire.

In sum, DTAs as regulatory capital embody a paradox. They are simultaneously essential stabilizers and sources of fragility. As accounting constructs, they align with IAS 12 principles only under profitability assumptions; as prudential instruments, they are discounted for lacking loss-absorbing capacity; and as fiscal mechanisms, their transformation into DTCs shifts private banking risk onto the sovereign. The literature therefore treats them as **"necessary but insufficient"** tools, providing short-term relief but raising long-term concerns for capital quality, market discipline, and fiscal sustainability.

2.5. DTC Mechanisms and Fiscal Implications

The introduction of Deferred Tax Credit (DTC) mechanisms reflects the effort of national policymakers to reconcile the accounting recognition of Deferred Tax Assets (DTAs) with prudential regulation. Under **Basel III** and the **Capital Requirements Regulation (CRR)**, DTAs that rely on future profitability are deducted from Common Equity Tier 1 (CET1) capital, as they do not constitute immediately available loss-absorbing resources (Basel Committee on Banking Supervision, 2011; CRR, 2013 (Art. 36(1)(c)). To address this limitation, certain jurisdictions created frameworks that convert DTAs into state-backed instruments, thereby ensuring their eligibility for full CET1 recognition.

The Greek case illustrates this process most clearly. Through Article 27A of the Income Tax Code, DTAs arising from loan loss provisions, write-offs, and sovereign bond restructuring losses can be automatically converted into DTCs when banks record after-tax losses (Law 4172, 2013; Law 4303, 2014; Law 4465, 2017). These credits are irrevocable and unconditional, providing banks with the ability either to offset future tax liabilities or, in the absence of taxable profits, to claim reimbursement from the state. As a result, what begins as an accounting entry contingent on future profitability is transformed into a sovereign-backed asset with full regulatory recognition.

From a theoretical standpoint, the mechanism achieves two objectives. First, it neutralizes the prudential concern regarding DTAs' lack of credibility as regulatory capital by converting them into guaranteed claims. Second, it transfers part of the banking sector's risk to the sovereign balance sheet, creating contingent fiscal liabilities (Bischof et al., 2021). In this sense, DTCs are hybrid constructs: they function simultaneously as accounting items, prudential instruments, and fiscal commitments.

The implications of this design extend beyond technical compliance. DTCs demonstrate how deferred taxation can be mobilized as a policy instrument to stabilize bank capital during crises. At the same time, they raise concerns about the long-term sustainability of capital structures heavily reliant on state guarantees and the reinforcement of the sovereign-bank nexus (Acharya, 2009).

The Greek framework for DTCs illustrates the theoretical trade-off between immediate stabilization of bank solvency and the embedding of fiscal risk into the structure of financial stability. It exemplifies how deferred taxation, typically regarded as an accounting matter, has become a central pillar in the interaction of banking regulation and public finance.

The conversion of Deferred Tax Assets (DTAs) into sovereign-backed Deferred Tax Credits (DTCs) has profound fiscal and macro-financial implications. As emphasized in the literature, DTCs constitute a form of **contingent liability** for the state, crystallizing during periods of weak profitability or systemic stress (IMF, 2020; European Commission, 2021). In this sense, they represent a direct transformation of private-sector losses into potential public obligations, blurring the line between financial stability tools and fiscal commitments.

The mechanism reinforces the **sovereign-bank nexus**, a self-reinforcing cycle in which banks rely on state guarantees for solvency, while sovereigns remain exposed to banking fragility through both direct (guarantees) and indirect (bond holdings) channels. This nexus has been extensively documented in the European context, where sovereign risk and bank stability are tightly linked (Merler & Pisani-Ferry, 2012; Acharya et al., 2014; Farhi & Tirole, 2018). In Greece, where banks hold large volumes of domestic government securities and simultaneously depend on DTCs for capital adequacy, the feedback loop is particularly acute.

From a stability perspective, the **short-term benefits** of the DTC mechanism are clear: it prevents immediate capital shortfalls and systemic bank runs by ensuring compliance with prudential capital ratios. However, this stabilization comes at the cost of **long-term vulnerabilities**. First, fiscal space is reduced, as contingent liabilities may become explicit during crises, undermining debt sustainability. Second, market participants increasingly interpret DTCs not as private capital but as implicit sovereign support, thereby adjusting risk assessments. Sovereign credit spreads may widen in anticipation of future fiscal burdens, while investor confidence in the banking sector remains conditional on continued state backing (ECB, 2021; Parliamentary Budget Office, 2022).

This dynamic embeds what has been described as the **"doom loop"**: banking crises generate fiscal costs through DTC activation and recapitalization needs; rising sovereign debt burdens, in turn, erode the credibility of state guarantees and increase bank fragility; this interdependence amplifies systemic risk (Acharya, 2009). The Greek framework, by institutionalizing unconditional and irrevocable guarantees, exemplifies how deferred taxation can stabilize bank capital in the short run but simultaneously entrench structural fragility in the sovereign-bank relationship.

In theoretical terms, DTCs illustrate the dual nature of deferred taxation as both an **accounting tool and a fiscal instrument**. While they enhance regulatory compliance ex ante, they also reshape the distribution of risk in the financial system by transferring losses from private stakeholders to taxpayers. Consequently, the sovereign-bank nexus emerges as a central dimension of systemic risk analysis,

demanding close coordination between fiscal, regulatory, and supervisory policies to avoid perpetuating the cycle of mutual dependence.

While Greece represents the most explicit institutionalization of DTCs, similar though less comprehensive schemes have been discussed or implemented in other EU jurisdictions. Italy introduced tax asset conversion mechanisms under Decree-Law 225/2010, later extended by Decree-Law 59/2016, allowing partial transformation of deferred tax assets related to loan losses and goodwill into credits. Spain and Portugal considered comparable frameworks during 2014-2015 but opted for more limited transitional arrangements. Conversely, countries such as Germany and France rejected DTC-style conversions, emphasizing fiscal prudence and market-based recapitalization. These variations underscore that DTCs are a discretionary policy tool rather than an EU-wide standard, raising questions about their comparability and long-term fiscal neutrality.

3. Research Gaps and Future Directions

The literature on deferred taxation in the banking sector has expanded in the aftermath of the global financial and Eurozone sovereign debt crises, yet several important gaps remain. These gaps highlight the need for integrated approaches that link accounting recognition, prudential regulation, and fiscal implications, particularly in relation to Deferred Tax Assets (DTAs) and Deferred Tax Credits (DTCs).

A first gap concerns the **integration of perspectives**. Research on AFIT has largely focused on technical aspects of accounting for income taxes (Graham et al., 2014; Van Breda & Ferris, 1989), while banking literature emphasizes the role of loan loss provisions and the generation of DTAs (Ahmed et al., 1999; Rigotti et al., 2016). At the same time, prudential studies stress the treatment of DTAs under Basel III and CRR (Basel Committee on Banking Supervision, 2011; ECB, 2021), and fiscal literature highlights the sovereign risk implications of state guarantees (Acharya et al., 2014; Farhi & Tirole, 2018). However, there is a lack of **holistic frameworks** that systematically combine these strands, assessing how deferred taxation simultaneously affects accounting transparency, capital adequacy, and fiscal sustainability.

A second gap lies in the **analysis of transparency and market valuation** of DTAs and DTCs. Although disclosures are acknowledged as key signals of capital quality (Beatty & Liao, 2014; Bischof et al., 2021), limited evidence exists on how investors and rating agencies actually incorporate these instruments into their risk assessments. Understanding whether markets discount CET1 ratios heavily reliant on DTCs would shed light on the credibility of capital structures built on sovereign guarantees.

Third, there is a gap in the **long-term fiscal assessment** of DTC mechanisms. While existing studies recognize DTCs as contingent liabilities (IMF, 2020; European Commission, 2021), few provide quantified scenarios of their potential impact on debt sustainability, especially in high-debt economies such as Greece. Fu-

ture work should explore how repeated activation of DTCs interacts with fiscal consolidation strategies and sovereign creditworthiness.

Finally, research is limited in the area of **macroprudential and stress testing frameworks**. Current supervisory methodologies often focus on credit, liquidity, and market risks but may underestimate the systemic role of deferred taxation. Incorporating DTC dynamics into stress tests would provide a more realistic view of banking system resilience, particularly under adverse profitability scenarios (ECB, 2021).

Beyond conceptual synthesis, several empirical approaches could operationalize these research gaps. Event-study designs could measure abnormal stock returns around announcements or disclosures of DTC conversions, assessing market perceptions of capital quality. Cross-country panel analyses could explore how the proportion of DTAs/DTCs in CET1 correlates with bank valuation multiples or credit spreads. Stress-test simulations incorporating DTC activation probabilities could evaluate systemic resilience under profitability shocks. Finally, textual analysis of financial statements could quantify the transparency and tone of deferred tax disclosures, linking them to market discipline and investor confidence.

In sum, future research must move beyond siloed analyses to develop **integrated models** of deferred taxation in banking. Such work would illuminate how DTAs and DTCs act as both stabilizers and sources of fragility, offering insights for policymakers seeking to balance the goals of financial stability, regulatory credibility, and fiscal responsibility.

Recent macroprudential stress-testing exercises by the ECB (e.g., the 2023 climate stress test) highlight the growing need to integrate deferred tax dynamics into systemic risk assessments. DTAs and DTCs affect banks' loss-absorbing capacity and post-stress capital trajectories, particularly when profitability shocks or climate-related losses erode taxable income. Incorporating these instruments into stress scenarios would improve the realism of solvency projections and clarify the extent to which sovereign guarantees underpin regulatory capital, thereby linking deferred taxation directly to macro-financial resilience.

4. Conclusion

The study of deferred taxation in the banking sector illustrates how technical accounting constructs can evolve into central policy instruments with systemic implications. Deferred Tax Assets (DTAs), arising from temporary book-tax differences such as loan loss provisions and write-offs (Ahmed et al., 1999; Rigotti et al., 2016), have become pivotal in debates about transparency, capital adequacy, and fiscal sustainability. Their recognition under **IAS 12** hinges on expectations of future profitability (IFRS Foundation, 2010), embedding forward-looking uncertainty into banks' financial statements.

From a prudential perspective, regulators have long expressed skepticism about the loss-absorbing capacity of DTAs. The **Basel III framework** and the **CRR** explicitly require their deduction from Common Equity Tier 1 (CET1) when de-

pendent on future profitability (Basel Committee on Banking Supervision, 2011; CRR, 2013 (Art. 36)). This treatment reflects concerns that DTAs represent contingent tax relief rather than tangible resources. To overcome these constraints, countries such as Greece introduced **Deferred Tax Credit (DTC) mechanisms**, which transform DTAs into state-guaranteed assets, thereby qualifying as CET1 capital (Law 4172, 2013; Law 4303, 2014; Law 4465, 2017).

Theoretically, this transformation highlights a duality. On one hand, DTCs provide short-term stabilization by ensuring that banks meet capital requirements during crises, reducing the risk of runs and systemic contagion (Diamond & Dybvig, 1983; Acharya, 2009). On the other hand, they embed fiscal risk within bank capital structures by transferring solvency concerns to the sovereign balance sheet (Merler & Pisani-Ferry, 2012; Farhi & Tirole, 2018). This feedback loop reinforces the **sovereign-bank nexus**, or "doom loop," whereby banking fragility undermines fiscal sustainability, and sovereign weakness in turn exacerbates banking instability (Acharya et al., 2014).

The literature therefore converges on the view that DTAs and DTCs are both **stabilizers and vulnerabilities**. They stabilize balance sheets ex ante, by aligning regulatory capital with accounting recognition, but simultaneously create ex post risks by embedding contingent liabilities in public finances. Transparency of disclosure plays a critical role in mediating these perceptions. Studies emphasize that mandatory and voluntary disclosures influence how markets interpret deferred taxation items, shaping investor confidence and market discipline (Beatty & Liao, 2014; Bischof et al., 2021).

Yet, despite significant academic attention, several **gaps remain**. Research has not fully integrated the accounting, regulatory, and fiscal dimensions of deferred taxation into a unified framework. Nor has it systematically examined how markets price capital structures heavily reliant on DTCs, or how sovereign guarantees affect long-term debt sustainability. Moreover, supervisory stress testing has yet to incorporate deferred taxation adequately, potentially underestimating systemic vulnerabilities (ECB, 2021).

In conclusion, the theoretical and policy debates on DTAs and DTCs reveal the complexity of deferred taxation as both an accounting issue and a systemic risk factor. For regulators, the challenge lies in balancing immediate stabilization with long-term fiscal sustainability. For scholars, the task is to develop interdisciplinary analyses that bridge AFIT theory, prudential regulation, and sovereign risk. Only through such integrative approaches can the full implications of deferred taxation for banking stability, regulatory credibility, and fiscal responsibility be properly understood.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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