

ASSET SECURITISATION AS A RISK MANAGEMENT AND FUNDING TOOL: WHAT DOES IT HOLD IN STORE FOR SMES ?

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Abstract

The following chapter critically surveys the attendant benefits and drawbacks of asset securitisation on both financial institutions and firms. It also elicits salient lessons to be learned about the securitisation of SME-related obligations from a cursory review of SME securitisation in Germany as a foray of asset securitisation in a bank-centred financial system paired with a strong presence of SMEs in industrial production.

Keywords: securitisation, ABS, structured finance, SME

JEL Classification: D81, G15, M20

“Just as the electronics industry was formed when the vacuum tubes were replaced by transistors, and transistors were then replaced by integrated circuits, the financial services industry is being transformed now that securitised credit is beginning to replace traditional lending. Like other technological transformations, this one will take place over the years, not overnight. We estimate it will take 10 to 15 years for structured securitised credit to replace to displace completely the classical lending system – not a long time, considering that the fundamentals of banking have remained essentially unchanged since the Middle Ages.”

Lowell L. Bryan¹

1 Objective

Although many financial institutions, large corporates, quasi-government agencies and even local governments and municipalities have recently begun to issue securitised debt on diverse asset classes, the securitisation paradigm has been largely confined to liquid asset types, which relegated the securitisation of SME-related payment obligations to sporadic captive finance transactions. However, in countries, whose industrial foundation is made up in large part by SMEs, such as Germany, asset securitisation would offer an interesting funding alternative to traditional channels of external finance captive to a pernicious bank-based financial system.

The following paper acknowledges the topical nature of asset securitisation and probes the impact of attendant benefits and drawbacks on the refinancing decision of financial institutions and firms. It also elicits salient lessons to be learned about the securitisation of SME-related obligations from a cursory review of SME securitisation in Germany as *pars pro toto* of asset securitisation in a bank-centred financial system paired with a strong presence of SMEs in industrial production. The utility of this instructive yet succinct exercise is to set the stage for a comprehensive and purposeful debate about use of securitised debt as an alternative refinancing mechanism regardless of issuer size and financial system. The paper is structured as follows. After a brief definition of asset-backed securitisation (ABS) we describe the key benefits and investment risks associated with asset securitisation in sections 3 and 4. Section 5 specially focuses on the securitisation of SME-related claims, such as SME loans held by banks or trade receivables owed to SMEs. Section 6 provides a synopsis of the German approach to SME securitisation. Section 7 concludes.

2 Definition of asset securitisation

2.1 The motivation of securitisation

Asset securitisation is a structured finance technique that allows for credit to be provided directly to market processes rather than through financial intermediaries. By engaging in securitisation issuers actively sponsor the commoditisation of asset risk through disintermediated debt refinancing, where capital markets channel funds to efficient uses of economic activity. In principal, securitisation serves as a refinancing mechanism to diversify external sources of asset funding and to transfer specific risk exposures. Conceptually, asset securitisation converts regular and classifiable cash flows from a diversified portfolio of illiquid present or future receivables (*liquidity transformation* and *asset diversification process*) of varying maturity and quality (*integration* and *differentiation process*) into negotiable capital market paper (“tranches”) issued by either the originator of the securitised assets/receivables or a non-recourse, single-asset finance company (“special-purpose vehicle” (SPV)). So these tranches are contingent claims on a designated portfolio of securitised assets, which can be “divided into different slices of risk to appeal to a range of investors” (Wighton, 2005).² They come in two broad classes of securities: debt-like (secured) notes and equity. Whilst the holders of debt-like notes establish prior claim to the underlying reference portfolio of loans in order of agreed seniority, issuers and/or asset originators frequently retain a residual equity-like class as illiquid first loss position, required by rating agencies as bad debt provision for expected loss. Issued debt securities differ in seniority and risk exposure (“stratified positions”), whose subordination creates leveraged investment on the performance of securitised assets (“reference portfolio”). Both investment return (principal and interest repayment) and losses associated with the underlying reference portfolio are allocated among the various tranches through prioritised contractual repartitioning according to subordination (Telpner, 2003). This risk sharing mechanism sustains a fine-tuned security design of customised debt securities with optimal mean-variance properties. Hence, issuers of asset-backed securities improve overall market efficiency³ by offering *marketable* financial claims on securitised asset exposures at *merchantable quality* (Kendall, 1996). From a broader economic perspective, the evolution of efficient securitisation markets has served to mitigate disparities in the availability and cost of credit in primary lending markets by linking singular credit facilities to the aggregate pricing and valuation discipline of the capital markets. Debt securities issued in securitisation transactions generally feature lower levels of investment risk than the original credit risk of underlying securitised exposures, mainly because securitised debt benefits from diversification and a variety of incorporated security mechanisms against credit and liquidity risk. Issuers have a wide range of support

mechanisms at their disposal to improve the quality of securitised assets to the extent that they warrant a selling price beyond what would be deemed necessary to offset attendant costs of managing the transaction. For instance, potential timing mismatch between repayment from the securitised (reference assets) and investor payout to issued debt securities requires tight interest and cash flow management. Commonly liquidity facilities are set aside in the form of back-up lines to cover liquidity shortfalls and to guarantee the full refinancing of a SPV as issuing agent. Even more importantly the external rating assessment of securitisation transactions strongly hinges on visible signs of credit risk protection. In many cases of issuers resort to (i) over-collateralisation by transferring credit risk at a cash discount, (ii) implicit guarantees through the cash flow structure and/or (iii) external third-party guarantees in order to provide *credit enhancement* to investors in issued debt securities.

From an issuer perspective, securitisation registers as an alternative source of funds for profitable economic activity at most resourceful factor input and efficient cost of capital, which is reflected one or more of the following key motivations:

- (i) to curtail balance sheet growth and realise certain *accounting objectives* and *balance sheet patterns*,
- (ii) to reduce *economic cost of capital* as a proportion of asset exposure associated with asset funding,
- (iii) to ease *regulatory capital requirements* (by lower bad debt provisions) in order to manage risk more efficiently,
- (iv) to efficiently access capital markets in lieu of intermediated debt finance at a cost of capital, which would not be possible on account of the issuer's own credit rating, and
- (v) to overcome *agency costs of asymmetric information* in external finance (e.g. "underinvestment" and "asset substitution").

While the last two aspects are particularly pertinent to corporate issuers, the first three arguments are more related to the refinancing advantages enjoyed by financial institutions, where asset securitisation serves as a powerful capital management tool. Depending on the relative importance of these objectives issuers engage in either *traditional/true sale* or *synthetic* securitisation. In a *true sale transaction* structure the originator sheds the asset risk associated with a selected pool of on-balance sheet exposures by selling them to a special purpose vehicle (SPV) ("conduit"),⁴ which takes legal title to the assets. Such single-purpose securitisation conduits are completely remote from the asset originator in terms of economic and legal recourse ("bankruptcy-proof") (Sullivan, 1998). The SPV

collateralises the purchased asset portfolio and refinances itself by issuing multiple classes of asset-backed securities (and equity) with different degrees of risk to capital market investors. By unloading credits off their books, loan originators reduce their economic (and regulatory) capital charge, and, at the same time, may use liquid funds from the proceeds of the true sale to refinance future lending activity.

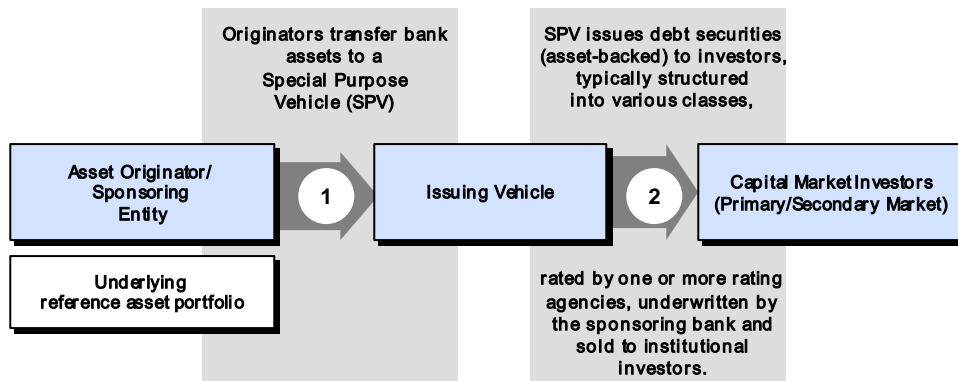


Fig. 1. *The securitisation process.*

Special purpose vehicles may also support *synthetic transactions*,⁵ where issuers create generic debt securities, so-called credit-linked notes (CLN), out of derivative structured claims on securitised assets to reduce economic cost of capital and raise cash from borrowing against existing assets and receivables.^{6,7} Synthetic transactions only transfer unwanted risk exposure of a specifically defined asset pool without placing assets under the control of investors through a transfer of legal title. This mechanism also allows (asset) originators themselves to securitise assets through derivative transactions without a SPV as underwriting agent.

Based on this expository definition of asset-backed securitisation, let us now survey the economic benefits and risks of asset securitisation.

3 Key benefits of asset securitisation

The economic reasoning of securitisation hinges on the ability of issuers as profitable enterprises to maximise shareholder value as the principal goal of economic activity. Management decisions evaluate the economic impact of competing strategic and operational objectives on shareholder value. Financial activities within business entities have to be geared to support the realisation of profitable objectives to what capital markets deem as attainable levels of economic efficiency.

Securitisation confers upon issuers mainly financial advantages related to more competitive capital management through efficient asset funding. Further objectives of securitisation might also include active balance sheet restructuring, market-oriented risk management of credit risk and diversified liquidity (Bär, 1997 and 1998). Hence, from a capital market perspective, it is imperative to assess how these aspects of securitisation affect the (shareholder) value of the issuer and whether the trade-off between envisaged benefits and attendant drawbacks yields positive payoffs to both issuers and investors.

3.1 Risk management, private information and capital structure choice

Risk Management is a transmission and control mechanism, which encapsulates different approaches by firms choose between the risk-return profiles of alternative (investment) strategies to maximise shareholder value. Asset securitisation is one operational means of risk management, which allows issuers to reallocate, commoditise and transfer different types of risks (e.g. credit risk, interest rate risk, liquidity risk or pricing risk) to capital market investors in return for some fair market price. While banks and other financial institutions view securitisation as an expedient means to evade inconsistent regulatory capital charges for credit exposures of similar risk (“optimisation of regulatory capital”), non-financial entities would employ securitisation primarily for the liquidity management of existing trade receivables.

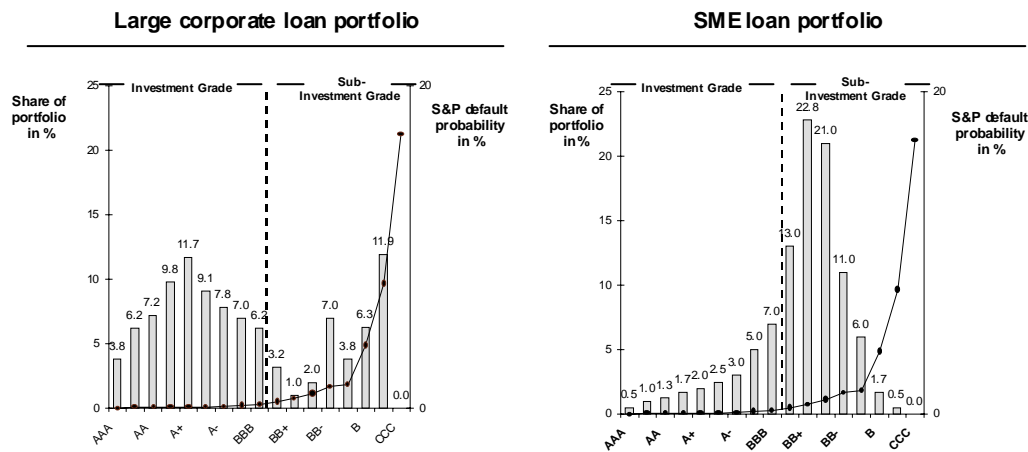


Fig. 2. Risk characteristics of corporate loan and SME loan portfolios (Jobst, 2003a).

Although there is not a single theory for the economic tenet of loan securitisation, several motivations might explain the issuance of securitised debt from a corporate finance perspective: (i) private information as a means to mitigate the regulatory capital charge and achieve greater

specialisation in areas of comparative advantage, (ii) avoidance of asset substitution and underinvestment, and (iii) reduction of the agency cost from asymmetric information in asset funding.

According to Greenbaum and Thakor (1987) private information about the originated assets would induce financial institutions to prefer the securitisation of better quality assets to mitigate their regulatory capital requirement for “overcharged” asset exposures, whilst worse quality assets are retained. For this selective bias to be economically sustainable issuers must extract positive payoffs from trading off the benefits from securitising low-risk reference portfolios against increased bankruptcy risk. Private information might also find an outlet in securitisation if issuers aim to achieve greater specialisation in sourcing and monitoring as areas of comparative advantage (Berger and Udell, 1993). For instance, private economic rents from bank lending explain the prominence of asset securitisation as a risk management tool. Especially, informational rents from SME lending in heavily bank-centred financial systems and the rather unfavourable rating grade distribution of typical SME loan portfolios (see Fig. 2 below) make loan securitisation a perfect candidate for efficient risk management.

Asset securitisation might also redress conflicts of interest between creditors and shareholders in the capital structure choice of firms concerning possible agency costs from “underinvestment” (Myers, 1977 and 1984) and “asset substitution” (Jensen and Meckling, 1976) due to excessive levels of debt or the presence of non-value maximising investment behaviour respectively. James (1988) as well as Benveniste and Berger (1987) show that securitisation tranches resemble secured debt, whose agency costs may be lower than for unsecured debt (Stulz and Johnson, 1985; Berkovitch and Kim, 1990). Similar to secured debt, securitisation allows issuers to appropriate partial debtholder wealth by carving out a defined pool of assets to satisfy securitised debt claims, which do not capture gains from the firm’s future investments. This prioritisation of debtor claims potentially alleviates underinvestment and renders existing debt less inhibitive on the realisation of new investment opportunities. Nonetheless, the securitised debt could possibly expropriate claimholder wealth if the proceeds from securitisation misallocated without disciplinary power by claimholders (Lockwood et al., 1996; Lang et al., 1995; Pennacchi, 1988). Consistent with conventional thinking about the capital structure choice issuers with high agency costs of debt and/or low growth prospects should be more likely to engage in asset securitisation.

We also need to investigate the effects of asset securitisation on the capital structure decision as a funding choice under asymmetric information. Under the *pecking order theory* (Myers and Majluf, 1984)

issuers with severe information asymmetry problems would prefer to issue secured debt (i.e. asset-backed), which carries lower agency cost, because investors receive their repayment directly from a diversified pool of asset exposures insulated from the issuer (Shyam-Sunder and Myers, 1999). The *trade-off theory* would restrict this choice only to cases where the marginal benefit of debt outweighs the associated amount of agency and financial distress cost. Hence, under the pecking order and trade-off theory asset securitisation is the refinancing instrument of choice for cash-strapped issuers, whose high agency costs of asymmetric information debar them from other forms of external finance.

3.2 Equity return, imputed cost of equity and economic risk transfer

The analysis of the benefits associated with asset securitisation as a funding alternative to traditional on-balance sheet debt finance also needs to consider the role of equity in the capital structure of issuers. The assessment of securitisation on the basis of the cost of debt alone essentially ignores what could be viewed as a conscious capital structure decision of “leverage in disguise.” In the following section we examine the leverage effect of securitisation on the return on equity and the *imputed (calculative) cost of equity* (“capital coverage”) (Röchling, 2002; Bär, 1998) for a *true sale structure*, which by definition changes the balance sheet composition of the asset originator.⁸ We illustrate the effect of asset securitisation on both economic cost of capital and the imputed cost of equity. First, we specify the total cost of funding as the weighted average cost of capital (WACC)⁹

$$WACC = k_E \times \frac{E}{E+D} + k_D \times \frac{D}{E+D}, \quad (0.1)$$

where the cost of equity k_E and the cost of debt k_D are weighted by the market value-based proportion of equity and debt in the capital structure (Damodaran, 1996). The imputed cost of equity k_{IE} is defined as the *contribution margin* from the cost of equity over the cost of capital of 100% debt finance (i.e. full leverage), so that

$$k_{IE} = WACC - k_D = \frac{k_E E + k_D D - k_D (E+D)}{E+D} = \frac{E(k_E - k_D)}{E+D} = \frac{k_E - k_D}{\frac{E+D}{E}}. \quad (0.2)$$

A numerical example illustrates the effect of (true sale) securitisation on the imputed (economic) cost of equity. Let us assume that the issuer holds exactly 8% equity (which would match the 8%

minimum capital requirement of banks for 100% risk-weighted assets and no risk weight reduction under Basle Accord (Basle Committee, 2004)¹⁰ and shareholder require at least 15% return on equity at a debt-to-equity ratio of $0.08/0.92 \approx 8.7\%$ (see Tab. 2). Hence, the imputed cost of equity before securitisation amounts to

$$k_{IE_{before}} = \frac{E(k_E - k_D)}{E + D} = \frac{0.08(0.15 - 0.05)}{0.08 + 0.92} = 0.008 \equiv 0.8\% . \quad (0.3)$$

By accepting a first loss position (FLP) of 3%, the issuer now holds 3% instead of 8% equity after completion of the securitisation transaction. The imputed cost of equity has fallen from 0.80% to

$$k_{IE_{before}} = \frac{E(k_E - k_D)}{E + D} = \frac{0.03(0.15 - 0.0509)}{0.03 + 0.97} = 0.0029 \equiv 0.29\% . \quad (0.4)$$

In our calculation the reduction of the imputed cost of equity by 0.51% percentage points in off-balance sheet refinancing stems from lower capital coverage, which could eventually reach zero in the extreme case of full leverage. In order to gauge the implications of different levels of imputed (marginal) cost of equity on shareholder return, we consider the net return of securitisation before and after including the cost of equity. We subtract the “total direct cost of debt” (weighted cost of debt, expected loan loss (and the cost of credit enhancement for the case of securitisation)) from the expected “return on securitisable assets” (“return on available assets”) for off-balance sheet (on-balance sheet) funding in order to derive the net return before the (weighted) cost of equity before (after) securitisation. Dividing this result by total equity capital yields the return on equity, which is clearly higher in the case of the off-balance debt refinancing (21.92%) compared to conventional on-balance sheet funding (17.50%).

The off-balance sheet conversion of securitised assets through the issuance of securitised debt also involves a change in the riskiness of debt as the return on equity increases. The default distribution of securitised assets shall serve as a straightforward example to illustrate this point. Since issuers commonly retain a first loss position (FLP) as “concentrated risk exposure” to cover expected losses only (see Fig. 3), any loss in excess of FLP is transferred to capital market investors via securitised debt. Although the weighted cost of debt increases in a higher debt-to-equity ratio, the transfer of economic risk implied by the reduction in equity (as FLP) from 8% to 3% alters the issuer’s residual risk exposure from credit default and caps the probability density at expected default loss.

<i>On-balance sheet funding</i>		<i>Off-balance sheet funding</i>	
Debt capital	92.00%	Debt	97.00%
Equity capital	8.00%	Equity	3.00%
Total capital	100.00%	Total capital	100.00%
Return of available assets	7.00%	Return of securitisable assets	7.00%
Weighted cost of equity (CoE)	1.20%	Weighted cost of equity (CoE)	0.45%
Weighted cost of debt (CoD)	4.60%	Weighted cost of debt (CoD)	5.00%
<i>Risk-free rate</i>	4.50%	<i>Risk-free rate</i>	4.50%
<i>Corporate risk spread</i>	0.50%	<i>Corporate risk spread</i>	0.50%
		<i>ABS structuring cost</i>	0.25%
WACC	5.80%	WACC	5.45%
Imputed cost of equity	0.80%	Imputed cost of equity	0.30%
Expected (credit) loss (EL)	1.00%	Expected (credit) loss (EL)	1.00%
		Credit enhancement (CE)	0.25%
Total direct cost (CoD + EL)	5.60%	Total direct cost (CoD + EL + CE)	6.34%
Net return		Net return	
<i>before CoE</i>	1.40%	<i>before CoE</i>	0.66%
<i>after CoE</i>	0.20%	<i>after CoE</i>	0.21%
Return on equity (RoE)	17.50%	Return on equity (RoE)	21.92%

Tab. 1. *Simplified calculation of imputed cost of capital and net return from asset securitisation.*

This risk sharing arrangement creates leveraged investment, where the risk-return profile of issued tranches differs from the risk-return profile of direct investment in the underlying assets. The leveraged loss exposure of securitised debt relative to the overall notional amount of securitised assets depends on the level of expected loss covered by the issuer through FLP (“enhancement level”) to make securitised debt less sensitive to moderate value changes of securitised assets. At the same time, the retention of “concentrated risk exposure” lowers the amount of required economic (equity) capital if *ex ante* total default loss (i.e. expected and unexpected loss) from securitised assets originally exceeded FLP. If the resultant decrease of the imputed cost of equity from economic risk transfer releases liquid funds at a higher net return after cost of equity asset securitisation increases total return on equity of the issuing firm. Note that the configuration of securitisation itself might imply interest rate and liquidity risk (see section 3.1) depending on the nature of the underlying reference portfolio of securitised assets and the security design of the transaction at hand, which complicate the economic rationale of securitisation beyond this admittedly simplified illustration (see section 5).

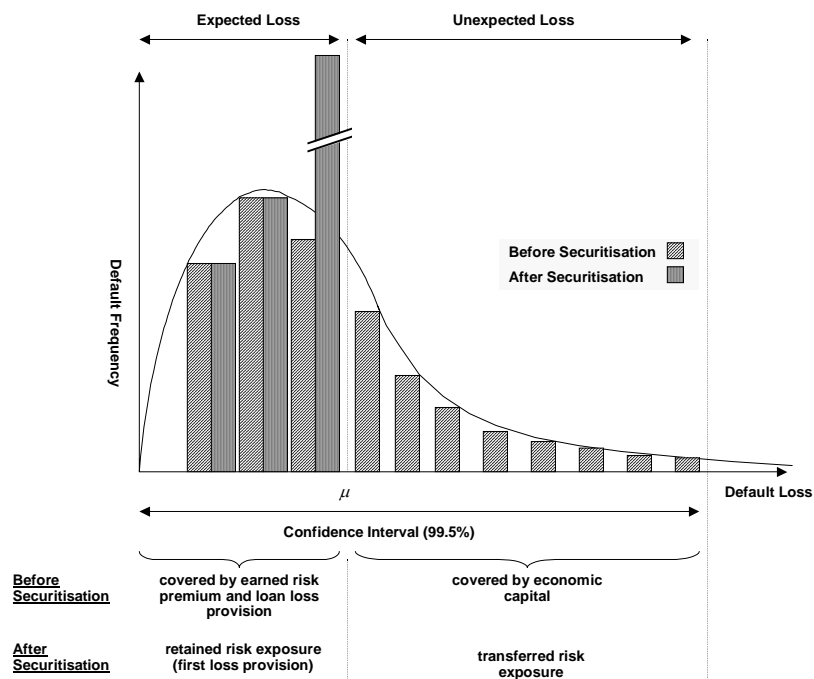


Fig. 3. Economic risk transfer.¹¹

4 General investment risks in asset securitisation

Securitisation is commonly understood as an important risk management tool, mainly because its inherent differentiation and integration process (“risk restructuring”) allows issuers to reduce their cost of investment funding by segregating the risk exposure of a designated pool of assets.¹² However, the conversion of balance-sheet risk into marketable securitised debt involves refined and complicated financial structures, which affect how credit (or asset) risk, market risk, liquidity risk and operational risk concur in securitised debt (see Fig. 4). The degree of investment risk in asset securitisation stems from two areas, namely (i) the characteristics and performance of existing and/or future receivables and other financial assets as sources of payments to the securitisation transaction (*collateral level*) as well as (ii) the allocation and distribution of payments from securitised assets to holders of the various tranches of issued debt securities (*security level*) in accordance with specific payment priorities and loss tolerance levels.

4.1 Credit risk

First and foremost, investors in securitisation transactions are concerned with the *credit (or asset) risk* of fully and timely repayment of securitised assets in the underlying reference portfolio. Although

credit risk transfer by means of structured finance debt obligations lies at the core of risk management through securitisation, there is a host of further credit risk contingencies beyond the collateral level, such as the servicing function of securitised assets, the payment of administrative fees to the SPV, the transfer of payments from debtors to investors and counterparty risk. Issuers apply structural provisions to mitigate credit risk, such as (internal or external) *credit enhancement* and *risk-sharing mechanisms* (through the subordination of issued debt securities) to attain a desired credit risk profile for issued debt securities.

Credit Risk	Structural Risk			Legal Risk
	Market Risk	Liquidity Risk	Operational Risk	
<p>Reference portfolio:</p> <ul style="list-style-type: none"> • degree of diversification & asset correlation • asset granularity • domicile of assets <p>Structural provisions:</p> <ul style="list-style-type: none"> • internal (credit enhancement through overcollateralisation or excess spread) • external (counterparty risk of third-party guarantee) • security design: senioritisation and tranche specification 	<p>Interest rate risk:</p> <ul style="list-style-type: none"> • reinvestment risk (← interest rate term structure) • interest rate differential (base risk) <p>Currency risk</p>	<p>Liquidity risk:</p> <ul style="list-style-type: none"> • <u>balance sheet-based liquidity risk</u>: prepayment risk (← maturity mismatch) • <u>market-based liquidity risk</u>: high trading costs and loss of market power of issuers due to low market volume in primary/secondary markets 	<p>Agency cost of:</p> <ul style="list-style-type: none"> • adverse selection • ex ante/ex post moral hazard • principal-agent problem 	<p>Fundamental legal framework & compliance:</p> <ul style="list-style-type: none"> • trade law • tax law • national/international supervisory regulation <p>Implementation of legal claims:</p> <ul style="list-style-type: none"> • corporate law • insolvency law • private law <p>Data availability:</p> <ul style="list-style-type: none"> • confidentiality & data disclosure • banking laws

Fig. 4. *Fundamental investment risks in asset securitisation.*

4.2 Structural risks

Market risk in securitisation mainly stems from adverse effects of interest rate and exchange rate movements on the issuer's cash flow management to repay securitised debt. In transactions with varying repayment terms and multiple (unhedged) currency denominations of securitised assets the payment agent of the transaction (i.e. the SPV or the issuer, if the transaction is completed without a SPV as conduit) would need to reconcile expected repayment from securitised assets (fixed or floating) with coupon payments (fixed or floating) to securitised debt issued to investors in order to minimise term structure risk, reinvestment risk and/or base risk.¹³ Failure to do so would cause fundamental market fluctuations to upset the scheduled amortisation and the timeliness of contractually agreed repayment to investors (*balance sheet-based liquidity risk*). The same considerations of balanced cash flow management apply analogously in the case of currency risk exposures on the basis of covered interest rate parity. Both currency and interest rate risks are frequently hedged with

standard derivative tools, such as cross-currency swaps and interest rate swaps. Additionally, *market-based liquidity risk* arises from *high trading cost* (Duffie and Gârleanu, 2001) associated with a small market volume of outstanding securitised debt issues and low trading activity in asset securitisation markets.

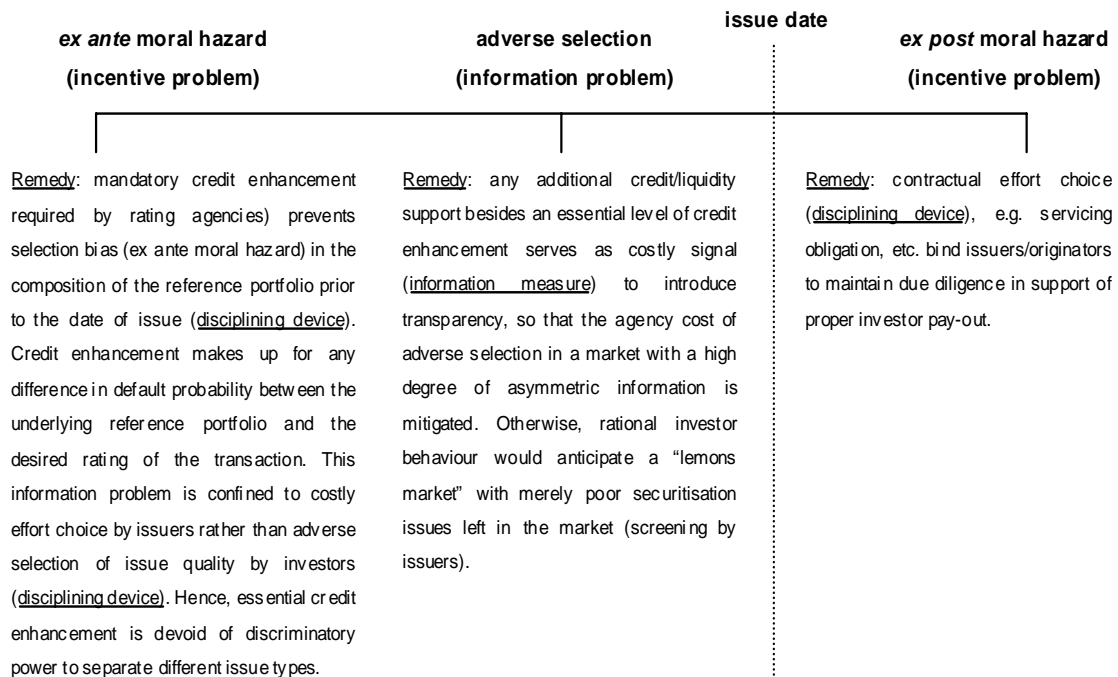


Fig. 5. *Asymmetric information problems in securitisation.*

Given the evolving regulatory and legal treatment of asset securitisation in response to perpetual financial innovation in structured finance, *legal uncertainty* from securitised debt is a major concern of investors and issuers. Asset securitisation involves a multitude of legal issues, such as trade law compliance of true sale structures, the implementation of legal claims (insolvency risk and set-off risk), information disclosure under divergent national banking laws and income tax liability (tax attribution risk), which affect both asset originators and issuers. These aspects will not be addressed within the scope of this paper. We refer readers to Kraakman and Hausmann (2000a and 2000b), Sullivan (1998), Frost (1997-1998) and Kravitz (1997).

Moreover, the variety of credit and legal risks from securitised asset exposures go hand in hand with *operational risk* from the intricate structural arrangements of securitisation transactions (see Fig. 5). In the presence of asymmetric information originators and issuers might be tempted to pursue own economic incentives, which imposes substantial agency cost on efficient asset securitisation. First and

foremost, market imperfection due to information asymmetry from valuation uncertainty could lead to *moral hazard* on part of issuers (asset originators in true sale transactions)¹⁴ if their effort level *before* and *after* the issue date is not incentive compatible with investor interests. Issuers (asset originators) could (i) retain a disproportionately large share of high-quality assets from the designated pool of securitised assets (reference portfolio) and replace them by assets of inferior quality (*ex ante moral hazard*), or (ii) neglect (or even relinquish altogether) the costly enforcement of contractual restrictions imposed on debtors (“effort choice”), whose payment obligations have been securitised (*ex post moral hazard*). Given the impending transfer of asset exposures through securitisation asset originators might reduce monitoring of securitised assets or exhibit selective bias in the composition of the securitised reference portfolio due to private information about individual asset exposures (*cherry picking*). Overall, both *ex ante* and *ex post* moral hazard involve the expropriation of investor wealth if issuers (asset originators) engage in selective bias as to the asset composition of the securitised reference portfolio or precipitate reduced effort levels as regards risk monitoring and portfolio administration after issuing securitised debt.¹⁵

Given the significant agency cost from moral hazard, issuers install support mechanisms, which transpire incentive compatible behaviour towards investors so as to mitigate investment risk from asymmetric information. The detrimental effects of moral hazard are generally resolved through a subordinated security design and a *first loss position* (FLP) or *credit enhancement*^{16,17} provided by originators to indicate their willingness to bear most (if not all) expected loss from the securitised assets (Jobst, 2003b and 2003c) as an effort choice against *ex ante* moral hazard (Frost, 1997).¹⁸

The complex security design of securitised debt also suggests superior information of issuers about the true valuation of securitised debt. Hence, rational investors would form negative beliefs about the actual quality of securitised assets and expect the adverse selection of securitised debt with poor reference portfolios similar to the *lemons market problem* à la Akerlof (1970). Since investors assume all (or most) transactions to be of poor quality, they request a reservation utility in the form of a lower selling price and/or higher return (“underpricing”) as compensation for the anticipated investment risk of a disproportionately large share of poor transactions in the securitisation market. In cognisance of the asymmetric information issuers suppress the pecuniary charge associated with the *lemons premium* by soliciting increased transparency about the true value of securitised assets through signalling and screening mechanisms. Commonly issuers commit additional internal and external resources to a securitisation transaction, such as reserve funds, variable proceeds from excess spread as well as second loss positions and liquidity facilities, as a costly signal of asset quality.

Issuers of asset-backed securities have to carefully balance this array of potential investment risks (credit risk, structural risk and legal risk) against the economic benefits of securitisation. Certainly, an informed securitisation decision will need to consider the suitability of the type of assets to be securitised. In the following section we analyse possible ways more illiquid assets, such as SME-related claims, are securitised by financial institutions and corporations.

5 Asset securitisation of SME-related claims

While mostly bank-sponsored structured finance has been in the limelight of finance professionals, growing internationalisation of business relationships and capital market-based business models have encouraged also non-financial enterprises to consider asset securitisation as a more cost efficient form of corporate finance. Corporate issuers mainly employ securitisation in order to both diversify funding sources at more competitive capital costs and pro-actively manage balance sheet growth. Especially large corporations have begun to replace traditional on-balance sheet debt and equity finance by securitised debt as an alternative external source of corporate finance to convert illiquid payment claims from services and deliverables (trade receivables) into marketable, commoditised debt. This proposition of corporate securitisation, however, does not apply to small- and medium sized companies (SMEs), which largely remain dependent on bank lending and private equity, mainly because low turnover, weak public disclosure of accounts and high monitoring effort inhibit direct access to capital markets.¹⁹ At the same time, shrinking margins from interest-based deposit business and new, more risk-sensitive regulatory capital standards (Basle Committee, 2004) keep banks hard pressed to adopt a more stringent long-term lending policy, which leaves risky borrowers most affected. Against this background, SMEs find themselves squeezed in the middle between rising borrowing cost in traditional channels of bank finance and restricted capital market access.

Although corporate securitisation has become a favourite structured finance instruments for an expedient reorganisation of financial relationships, technical barriers to entry (e.g. critical amounts securitisable asset exposure and prohibitive start-up costs) have dissuaded smaller companies from directly accessing asset securitisation markets without the support of financial institutions. Aside from bank-sponsored loan securitisation through *collateralised loan obligations* (CLOs), *asset-backed commercial paper* (ABCP) programmes have evolved as an alternative form of asset securitisation, whose flexibility (in terms of security design and underlying asset type) and disclosure requirements about securitised assets remedy existing market challenges of refinancing SME-related exposures. ABCP programmes are typically administered by bankruptcy-remote SPVs to finance the acquisition of consumer and commercial receivable pools or securities of varying maturity with the proceeds of

short-term commercial notes issued to capital market investors. The most common types of exposures sold by asset originators to these conduits are trade receivables, consumer loans, mortgages as well as lesser known asset classes, such as auto rentals and revenues from whole business and project finance. While some financial institutions use ABCPs for the sole purpose of refinancing their own lending activity on the back of existing or revolving asset pools, many banking organisations (called “arrangers”) have successfully sponsored *multi-seller* ABCP securitisation programmes to fund corporate clients by securitising their asset exposures from trade receivables via SPVs. This refinancing mechanism allows banks to extend loans to corporate customers in return for their contribution of payment claims to a standing asset portfolio.²⁰ Corporate banking clients, especially SMEs, benefit from the cost efficient funding through ABCP conduits. In *SME conduits* of multi-seller ABCPs especially small companies can seek indirect funding from capital markets in return for selling their payment claims from trade receivables to the SPV (“liquidity generation”).²¹ Multi-seller ABCPs in the dealer-placed commercial paper market offer intermediated access to securitisation markets for small-scale originators, whose collateralisation of commercial receivables works up the spectrum of refinancing alternatives. ABCP programmes frequently decrease overall refinancing costs (after consideration of transaction costs) to a level lower than what would have been obtainable in conventional on-balance sheet external finance (such as bank debt) and standalone off-balance sheet funding (project finance ABS and whole business ABS). Such a reduction in the financing cost mainly derives from the diversification effect of pooling individual asset claims into the securitised reference portfolio and the higher rating classification of ABCP programmes thanks to credit de-linkage and bankruptcy remoteness of issued debt securities from the originator. ABCP has become a popular source of external finance particularly in those countries, where more stringent bank lending have dried up conventional channels of credit supply amid a deteriorating equity base. In summary, asset-backed securitisation (ABS) techniques that involve the issuance of structured claims on the performance of SME-related payment claims, such as trade receivables by SMEs, future operating revenues from SMEs and SME loans originated by financial institutions, are specified as follows:

- (i) Channels of securitised asset refinancing by corporations (“corporate securitisation”):
 - a. indirect: Multi-seller *asset-backed commercial paper* (ABCP) programmes are methods of securitisation sponsored by financial institutions to facilitate the funding of selected asset exposures on a short-term basis. If these assets are trade receivables of SMEs the ABCP programme is referred to as a *SME conduit*.
 - b. direct: Companies themselves engage in asset-backed securitisation (ABS) by securitising own payment claims, such as long-term revenues from entire operations,

a particular line of business (*whole business ABS*) or defined project cash flows (*project ABS*).²²

- (ii) Channels of securitised asset refinancing by banks: banks securitise medium-term and long-term SME credit exposures in large scale asset-backed transactions, so-called *SME collateralised loan obligations* (CLOs).²³

In the next section we use the example of Germany to extract important lessons from the development of SME securitisation in a historically bank-dominated financial system with a strong SME sector.

6 The German approach to SME securitisation

6.1 Asset securitisation in Germany

The German bank-centred financial system is renowned *Hausbanken* (“house banks”) as a hallmark of a close-knit network of long-term lending relationships, with capital markets playing only a minor role in external finance. More than three million German *Mittelstand* (SME) companies represent the backbone of the German economy²⁴ and are traditionally financed by banks, which partly refinance their exposures by “on-lending”²⁵ through government-sponsored credit programmes²⁶ as secured credit finance. This make-up of the financial system has made corporate lending vulnerable to mounting competitive pressure on already beleaguered banks. Tighter risk controls of revised bank capital standards and higher investor demands on equity returns poised German banks to recognise the new reality of a more risk-return oriented approach. After the U.K. mortgage lending companies were the first financial institutions to debut modern securitisation in Europe, especially large German commercial banks, such as Deutsche Bank and Dresdner Bank fully embraced asset-backed securitisation through CLOs and ABCPs as one possibility to marry the benefits of credit business with fixed income management. Surprisingly, such bank-sponsored securitisation of payment claims also included SME-related obligations early on. This development is remarkable to the extent that reflects the potential of a bank-based financial system to seize on an inherently capital market-based structured finance technique to refinance highly illiquid asset exposures.

In 1998 the first German SME portfolio was securitised by Deutsche Bank in CORE 1998-1.²⁷ After Deutsche Bank had launched this first large-scale true sale loan securitisation transaction in Germany, other large commercial banks quickly followed suit and enlisted securitisation as a

refinancing technology to unload highly illiquid SME credit exposures. At the same time, one prominent government-sponsored credit programme administered by the *Kreditanstalt für Wiederaufbau* (KfW) for the promotion of SME loans and residential mortgages²⁸ has been amended by an asset-backed securitisation scheme to provide more cost-efficient funding to bank creditors wishing to refinance the origination of such asset exposures. In this way KfW envisaged to discharge its public service obligation of alleviating competitive pressures of commercial banks to adopt more stringent lending conditions for SME and private mortgage loans. Overall, German commercial banks have quite successfully pursued the securitisation of SME loans over the last six years – either as standalone transactions or sponsored by securitisation platforms of quasi-government agencies, such as KfW’s PROMISE (Promotional Mittelstand Loan Securitisation) synthetic CLO programme, which so far has issued 12 transactions at total market value of more than €17.4 billion (U.S.\$20.9 billion) in collaboration with large private banks such as HVB (HypoVereinsbank) Group, Commerzbank and Dresdner Bank since its inception at the end of 2000.²⁹

Although many German SMEs have become aware of the benefits associated with direct ABS transactions in view of more stringent bank lending conditions, they have not made the securitisation of trade receivables an integral part of their refinancing decisions.³⁰ Hence, amidst sporadic corporate securitisation (such as *Tenoris Finance Ltd.* (2001) and *Volkswagen Car Lease No.1-3* (1999-2002) to name two well-known examples), *bank-sponsored* securitisation – be it through SME CLOs (with and without the involvement of KfW as arranger) or SME conduits – constitutes the main driver of incipient SME securitisation in Germany.

6.2 The KfW PROMISE platform and the “True Sale Initiative” (TSI)

6.2.1 The KfW PROMISE platform

In anticipation of potential structural changes and associated adverse effects on lending conditions due to tighter risk controls in the German banking sector, the PROMISE platform assists German financial institutions to achieve regulatory capital relief (see section 2.1) for securitised SME lending. Further reasons for the prominence of KfW’s securitisation programme include the limitation of the economist cost of capital and the generation of additional liquidity from an alternative source of external finance. The standardised securitisation structure of PROMISE CLOs is based on a partially funded, synthetic transaction, where the originating bank enters into a credit default swap (CDS) with KfW as protection provider, taking over the entire default risk of a selected pool of SME loan exposures (i.e. the notional value of the reference portfolio of assets) (see Fig. 6). The transferred

credit risk is subsequently structured in subordinated set of tranches with different seniority, so that the largest share of the risk exposure (80-90%) carries hardly any default risk. This co-called “super-senior” tranche is passed onto another bank (preferably an OECD bank for a low risk-weighting of the risk transfer) via a senior CDS. The first loss position (FLP), the most junior tranche, which carries almost all of the expected default loss (based on historic default rates), is retained by the originating bank or covered by a junior CDS. KfW sells the remaining mezzanine tranches as subordinated bonds (credit-linked notes (CLNs)) to capital markets via a SPV, which operates under the PROMISE platform and assumes credit-linked certificates of indebtedness to link the issued CLNs to the reference portfolio. The SPV might seek collateralisation by a third party up to the notional amount of the issued CLNs.

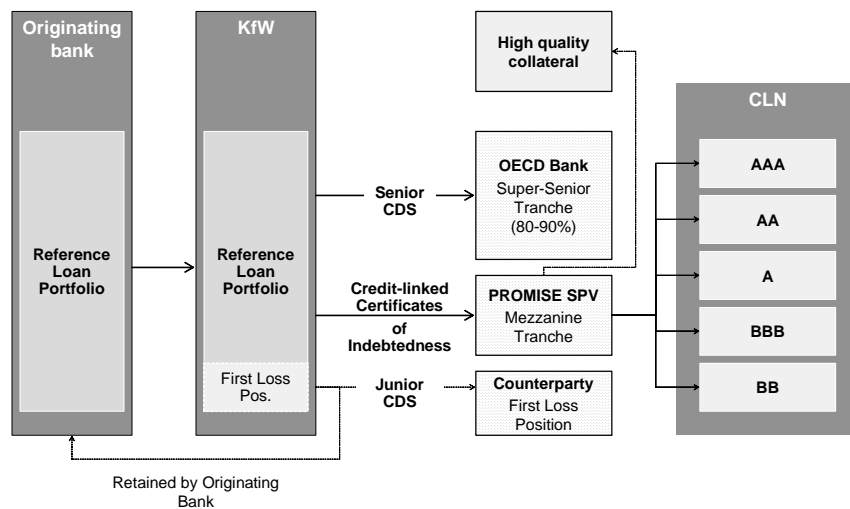


Fig. 6. *The KfW PROMISE securitisation platform structure.*

In more advanced security design, KfW accommodates several loan portfolios of different banks in a slightly modified structure. In 2002 KfW made inroads with the diversification demands raised by the stratified German mortgage loan market by arranging a *multi-seller securitisation* transaction (see section 5) with the cooperative mortgage bank DG Hyp (Deutsche Genossenschafts-Hypothekenbank AG) as originator, where the credit risk of several portfolios of credit cooperatives were pooled with DG Hyp and placed in the capital market via the KfW’s PROMISE platform (PROMISE 2002-C). This arrangement would also allow smaller financial institutions to resort to securitisation conduits as an alternative refinancing mechanism. In this way, KfW extends the reach of securitisation in the effort to maintain the viability of SME lending under the KfW’s promotional credit programme.

6.2.2 The “True Sale Initiative”(TSI)

True sale securitisation has remained scarce in Germany due to regulatory and taxation constraints as well as unresolved legal issues as regards redemption criteria and insolvency proceedings in cross-border disputes. For instance, it took until 1997 (BaFin, 1997a and 1997b; Bartelt, 1999), when the national regulatory body for banking supervision, the German Federal Financial Supervisory Authority (*Bundesaufsichtsamt für Kreditwesen (BaFin)*), first permitted the use of ABS,^{31,32} at a time when the U.S. and most all (Western) European countries had already put in place a legal framework for true sale securitisation. Moreover, in 2003 the German trade tax (*Gewerbesteuer*) law, a major obstacle to true sale securitisations in the past, was amended by the Act to the Support of Small Businesses (*Gesetz zur Förderung von Kleinunternehmen und zur Verbesserung der Unternehmensfinanzierung*), which exempts SPVs purchasing certain receivables originated by banks in (true sale) securitisation transactions from trade tax. Also further efforts are underway to actively promote true sale transaction structures in the bid to (i) improve the external financing of SMEs by creating an alternative source of funds, and (ii) facilitate the risk management of asset originators by way of securitising SME loans.

In keeping with its public service task of safeguarding adequate private and SME sector financing the KfW also sponsored the so-called “True Sale Initiative” (TSI) as a concerted effort of German banks to facilitate traditional off-balance sheet (true sale) asset securitisation in Germany, targeting a capital-market segment whose national development has been retarded by unfavourable legal, tax and accounting provisions. After consultation with market participants, supervisory authorities and rating agencies the TSI puts forth a uniform securitisation platform, which promises to lower refinancing cost and capital charges for credit exposures securitised by participating banks. According to a joint statement released on 12 December 2003 by representatives of the 13 participating banks – the most important commercial banks, cooperative banks and the savings bank group³³ – the proposed TSI foundation structure (see Fig. 7) establishes a multi-seller securitisation platform as a standing arrangement for the formation of SPVs as insolvency-remote ABS issuers. The economic case for TSI derives from the development of a cost-efficient, ready-made securitisation infrastructure, which allows participating banks to securitise reference loan portfolios through newly established SPVs within a foundation structure.

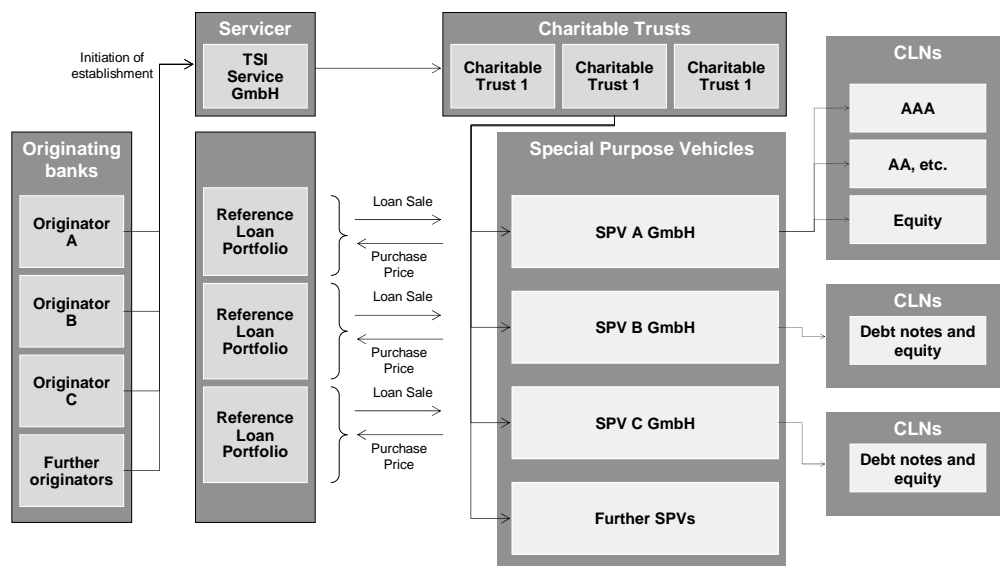


Fig. 7. The TSI securitisation platform structure.

The structural model of TSI is comprised of a limited liability service company (“TSI Service GmbH”) as servicing agent and three non-profit foundations (charitable trusts), which jointly create separate SPVs as limited liability company under German law (“GmbH”) to refinance each loan portfolio bought from a participating bank. The SPV converts the payment received from a reference portfolio of securitised assets into tradable debt securities. The TSI Service GmbH is also charged with the tasks of (i) developing uniform minimum standards for (true sale) securitisation in terms of both reporting and administration and (ii) providing a forum of exchange for originating banks. Overall, the structure of TSI conspicuously emulates the economic logic of large-scale (indirect) synthetic securitisation facilitated by the KfW-sponsored PROMISE and PROVIDE securitisation programmes (see section 6.2.1), which aim to dissuade German banks from restrained SME and private mortgage lending as they adjust their risk exposure in the face of rising competitive pressures on traditional funding. Given an apparent lack of a gross-roots conviction of German corporations to make asset securitisation an important source of external finance any time soon the multi-seller design of TSI provides brokered access to securitisation markets as an alternative form of refinancing to small and regional banks in a financial system, where the dominance of bank-based external finance has so far thwarted any serious attempt at establishing large-scale corporate securitisation.

6.3 Lessons learned from SME securitisation in Germany

Although the case of quasi-government sponsored asset securitisation in Germany is limited in scale and scope, the successful introduction of synthetic securitisation platforms by KfW bears witness to

the capacity of a heavily bank-dominated financial system to absorb a capital market-based refinancing tool. It also reveals the appreciable influence of efficient and transparent securitisation on the willingness of banks to securitise SME loan exposures to realise strategic and operational objectives. Although securitisation markets generally have been equivocal about a preferred transaction type (true sale vs. synthetic securitisation), in Germany the volume of partially or unfunded, synthetic ABS transaction structures have outstripped fully-funded traditional (true sale) ABS structures at a ratio of roughly 25 to 1 in 2002, while only €1.31 billion (U.S.\$1.57 billion) of the €32.8 billion (U.S.\$39.3 billion) total involved true sale transactions (Althaus et al., 2003). The synthetic nature of the German ABS term market due to the predominance of large scale KfW-arranged transactions (PROMISE and PROVIDE) and several ABS/ABCP securitisation schemes developed by large German commercial banks (e.g. CORE, CAST, GLOBE and HAUS by Deutsche Bank, GELDILUX by HVB Group and SILVERTOWER by Dresdner Bank to name a few) indicates that mainly systemic obstacles (e.g. the trade taxation of SPVs of true sale transactions in Germany) have fuelled the growth of synthetic securitisation, which caters to the optimisation of regulatory capital and risk management rather than efficient refinancing (which typically applies to true sale structures).³⁴ At the same time, standardised securitisation structures have contributed to informed investment and lower issuing cost. Hence, the case of asset securitisation in Germany is instructive as to how institutional constraints shape the nature of securitisation, whose structural versatility offers economic benefits irrespective of the configuration of the financial system. It also suggests that a bank-based financial system like Germany would be more likely to see the development of mature securitisation markets to be determined by financial sector initiatives, whose reach and intensity might be enhanced by top-down initiatives of quasi-government agencies like KfW.

7 Conclusion

In the previous sections we attempted to equally privilege the benefits and drawbacks associated with asset securitisation by financial institutions and corporations. We also explained the various forms of ABS structures as they pertain to the securitisation of SME-related claims. Finally, we review the evolution of the German securitisation market in order to highlight salient stepping stones in the process of establishing the securitisation of SME-related payment obligations in a financial system, where bank-based external finance coincides with a strong presence of SMEs in industrial production. Overall, SME securitisation as an alternative source of liquid funds seems promising amid increased political attempts to foster what could be regarded a level playing field in the regulation, taxation and legal treatment of asset securitisation across countries. The elimination of

significant national disparities in these areas, especially as regards true sale transactions, would certainly be highly desirable to expand the spectrum of “securitisable assets” to include more illiquid and heterogeneous asset classes, such as SME-related payment claims. So far SME securitisation remains largely limited to indirect securitisation transactions, where mainly banks issue securitised debt on the back of SME-related claims to fund future lending activities. At the same time, smaller corporations in capital-market based financial systems (e.g. the U.K. and the U.S.) would enlist the help of banks as arrangers of securitisation transactions due to costly direct capital market access. However, as banking competition dries up traditional channels of funding riskier SME borrowers, the search for alternative sources of capital might encourage SMEs to consider asset securitisation to meet funding needs by pledging asset receivables to multi-seller ABCPs. Also lower agency cost of asymmetric information vis-à-vis external investors in securitisation transactions (which are valued on the specific performance of a designated asset portfolio) might give securitised debt an edge over other forms of external finance. Banks would be more inclined to make use of uniform securitisation platforms (such as KfW’s PROMISE deal structure) to lower the refinancing cost of SME loans they are inevitably bound to originate due to traditionally higher risk-adjusted margins from SME loans and/or high macroeconomic importance of SMEs as commercial borrowers (like in Germany). Although substantial legal uncertainty and incompatible financing strategies may render securitisation less pressing for SMEs than for the banking industry, it is safe to say that it might not be too long until asset securitisation will join ranks with traditional (intermediated) debt finance.

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² The principal asset classes of securitised reference portfolios are loans, high-yield bonds, mortgages, credit card transactions, licence and franchise operations, lease agreements as well as trade deliverables and services, which determine the classification of the securitisation transactions: collateralised loan obligations (CLOs), collateralised bond obligations (CBOs), collateralised mortgage obligations (CMOs), credit card asset-backed securitisation (ABS), student loan ABS or trade receivables asset-backed securitisation ABS.

³ The securitisation process also broadens the investor base, as the pooling of asset exposures makes the securitisation large enough to be efficient – even though securitised assets tend to be fairly illiquid and private in nature.

⁴ SPVs are best understood as trust-like entities, which are founded solely for the task of securitising the reference portfolio of assets.

⁵ Synthetic transactions come in various structural arrangements, which can be specified along three major dimensions: (i) the level of funding (unfunded, (fully) funded or partially funded); (ii) the involvement of a SPV as issuing agent (indirect or direct securitisation); and (iii) the degree of collateralisation of funded elements by means of government bonds, third-party guarantees, letter of credit, certificate of indebtedness, *Pfandbriefe* and other acceptable type of collateral).

⁶ Originators only transfer credit risk, which allows them to retain customer relationships and servicing revenues (Böhringer et al., 2001). See also Zweig (2002 and 1989).

⁷ The IMF defines true sale transactions as “the creation of securities from a pool of pre-existing assets and receivables that are placed under the legal control of investors through a special intermediary created for this purpose.” (IMF, 2004).

⁸ For simplicity we assume that the issuer re-invests the maximum proceeds from the securitisation (nominal value of the reference portfolio minus expected loss and structuring cost) at the weighted average cost of capital (WACC), so claimholder rights of debt and equity remain unaffected by use of funds from securitised debt. This approach also implies no change in the balance sheet volume if we rule out negative net present value reinvestment of proceeds.

⁹ Note here that this WACC-based balance sheet approach is taken from the perspective of the asset originator, whose total assets are assumed to be securitised. In other words, we only analyse the relative balance sheet effect of increased leverage over a defined set of securitised asset exposures of the same asset return and marginal cost of debt.

¹⁰ See also Basle Committee (2002a, 2002b and 2001).

¹¹ Adapted from Bluhm (2003). See also Schierenbeck (2001) and Ong (1999).

¹² See Skarabot (2002), Leland (1998), Frankel (1991) as well as Rosenthal and Ocampo (1988) for an economic analysis of this risk transfer property of securitisation.

¹³ *Investment risk* arises if both cash inflows and cash outflows are fixed interest payments but differ in maturity (“maturity mismatch”). In contrast, *base risk* arises from a mismatch of cash inflows and cash outflows as floating interest payments on different interest reference rates. *Term structure risk* refers to an insufficient immunisation against interest rate movements if cash inflows are fixed (floating) interest payments and cash outflows are floating (fixed) interest payments.

¹⁴ Note that the distinction of issuer and asset originator reflects the fact that asset originator and issuer are the same entity in synthetic structures without SPV. The involvement of a SPV in the transaction structure limits our comments on major incentive problems to the asset originator only.

¹⁵ See also Leland (1998). See also Leland and Pyle (1977) for a reference on the agency cost of asymmetric information in external finance.

¹⁶ The Basle Committee on Banking Supervision (2002b) defines credit enhancement as a contractual arrangement [.] in which the bank retains or assumes a securitisation exposure and, in substance, provides some degree of added protection to other parties to the transaction. [...]” See also Jobst (2004).

¹⁷ See also Pfister (2002), Gluck and Remeza (2000), Falcone and Gluck (1998), Howard and Merritt (1997), Becker and Speaks (1996) as well as Cumming (1987).

¹⁸ However, as opposed to DeMarzo and Duffie (1997), who interpret the retention of the most junior claim in a transaction as a costly signal in the spirit of Leland and Pyle (1977), credit enhancement does *not* constitute a signalling device, as it fails to increase transparency. Only in combination with remedial measures against *ex ante* moral hazard (such as optimal tranching) can issuers ward off the risk of possible adverse selection à la Akerlof (1970).

¹⁹ The “capitalisation” of the financial system at hand arguably signals the importance of market transparency in external finance.

²⁰ The sponsoring bank typically provides liquidity and credit enhancements to the ABCP programme, which aid the program in obtaining high quality credit ratings (Office of Thrift Supervision, 2003).

²¹ SME conduits traditionally accept only large SME receivables of at least €50 million (U.S.\$60 million) into ABCP programmes. However, over the last three years some arrangers of ABCP have begun to specialise in small-sized deals, which involve more than 10 creditors and a minimum value of individual asset claims of at least €5 million (U.S.\$6 million).

²² In this case financial institutions merely act as underwriters. Note here many large corporations have established own securitisation platforms (e.g. General Electric, Siemens). Whole business and project loan ABS transactions of SMEs are hardly observed but in the U.K.

²³ See also Bund (2000a and 2000b), Herrmann and Tierney (1999), Eck (1998), Kohler (1998), Stopp (1997), Ohl (1994).

²⁴ According to the *Institut für Mittelstandsforschung* (IfM) in Bonn, more than 3.3 million SMEs represent 99.5% of all registered enterprises in Germany. German SMEs employ more than 70% of the total workforce and generate almost 60% of GDP (DSGV, 2004). See also Albach (1983) for a general description of the German *Mittelstand* and its pivotal economic role.

²⁵ “On-lending” of residential mortgages by government agencies could be compared to mortgage funding by *Fannie Mae*, *Freddie Mac* and *Ginnie Mae* or collateralised bank advances for mortgages by the *Federal Home Loan Bank* in the U.S. In the case of Germany government agencies, such as the *Kreditanstalt für Wiederaufbau* (KfW), would provide funding to SMEs via commercial banks as underwriters, who retain full liability for the repayment of principal and interest.

²⁶ The *Kreditanstalt für Wiederaufbau* (KfW), jointly owned by the Federal Republic of Germany and the German states, is one of the development agencies, commissioned by the German government to ease the financing costs for SMEs and private homeowners as well as to promote export and project finance in Germany and developing countries abroad.

²⁷ The CORE 1998-1 transaction securitised the cash flow proceeds from DM-denominated loans to over 5,000 German SMEs (and a small selection U.S.\$-denominated bonds) at a total notional value of DM4.26 billion (€2.17 billion, U.S.\$2.6 billion). This ground-breaking deal did not only win critical acclaim for kick-starting the European CLO/CBO market, which has developed into the fastest growing sector of European asset-backed securities. It was also the first securitisation of German SME loans and the most highly diverse CLO portfolio to come to global capital markets. At that time, Deutsche Bank AG estimated its overall share in total lending to German SMEs to amount to 5.3% of a total market volume of €58 billion (U.S.\$70 billion) in the first half of 1999 (Deutsche Bank, 1999).

²⁸ The complete range of statutory tasks of KfW include the promotion of SMEs, home finance or housing modernisation, the protection of the environment and the climate, export and project finance and the promotion of the developing and transition countries.

²⁹ Although both agency-sponsored SME and RMBS securitisation platforms have already established an impressive four-year track record, the “German share” in European securitisation of 3.4% of €207 billion (U.S.\$248 billion) in 2003 (Source: Thomson Financial) is still found wanting; yet, the German on-balance sheet equivalent to off-balance sheet ABS structures, the *Pfandbrief*, claimed a respectable 81.5% of €219 billion (U.S.\$263 billion) outstanding volume in 2003 (Source: Dealogic Bondware).

³⁰ The exact definition of SMEs as a mostly privately owned, niche market operators varies by country. For instance, according to the *Institut für Mittelstandsforschung* (IfM) in Germany SMEs are classified by annual turnover (\leq €1 million [small size enterprise] and \leq €50 million [medium size enterprise]) or by the number of employees (\leq 9 employees [small size enterprise] and \leq 499 [medium size enterprise]). A revised classification by the European Union in May 2003 raises the threshold values of annual turnover and introduces balance sheet volume as a third measure: (i) annual turnover (\leq €2 million [micro size enterprise], \leq €10 million [small size enterprise] and \leq €50 million [medium size enterprise]), (ii) balance sheet volume (\leq €2 million [micro size enterprise], \leq €10m [small size enterprise] and \leq €43 million [medium size enterprise]), and (iii) number of employees (<10 employees [micro size enterprise], <50 employees [small size enterprise] and <250 employees [medium size enterprise]).

³¹ See also Eichholz (2000).

³² After the Circular 4/97 by the German Federal Financial Supervisory Authority (BaFin), the October 2002 Guideline by the German Institute of Accountants (IDW) laid the groundwork for the legal and accounting treatment of asset securitisation in Germany, the continued trade tax liability (“withholding tax”) of

bankruptcy-remote special-purpose vehicles has practically rendered true sale securitisation meaningless. See also Bernard et al. (2003).

³³ On 9 July 2003, Bayerische Landesbank, Citigroup, Commerzbank, DekaBank, Deutsche Bank, Dresdner Bank, DZ BANK, Eurohypo, HSH Nordbank, HVB Group, KfW Group, Landesbank Hessen-Thüringen and WestLB AG signed a Letter of Intent to define the business model for a securitisation platform to facilitate traditional (true sale) transaction structures in Germany (KfW Group, 2003).

³⁴ See also Meissner (2001).