Liquidity as a Condition of Survival: The Collapse of the Signa Group and the Lessons for Investors in Illiquid Assets

Roland Rupprechter[1]

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Abstract

This paper examines the collapse of the Signa Group between 2023 and 2026 — the largest insolvency in recent Austrian economic history: across all proceedings, claims of some 27.6 billion euros were filed. Writing from the perspective of a financial analyst and drawing exclusively on publicly available information, the paper asks whether holding more liquidity would have prevented the collapse — and what the case teaches about assets that are hard to exit, about concentration risk, valuation discretion and high leverage.

The analysis traces the group structure with its roughly one thousand companies, describes how funds were raised from large investors, bonds, secured property loans and profit participation certificates, and assesses the interaction — described in press investigations and analyses — between intra-group rents, fair-value revaluations and the borrowing built upon them. The counterfactual test yields the following result: more liquidity would probably have prevented or substantially mitigated the collapse in its specific form — an uncontrolled cascade of insolvencies from November 2023 onwards; without lower leverage, fixed-rate funding and more resilient structures, however, a severe crisis of adjustment would have been unavoidable even with larger cash holdings.[2]

From the comparison with private equity investments, open-end and closed-end real estate funds and other asset forms that are difficult to value, conclusions for investors are derived: partial commitments rather than full investment, a long

[1]Roland Rupprechter, Economic Research, R&B Wealth Management, Kreuzgasse 1a, 6850 Dornbirn; Member Austrian Association for Financial Analysis and Asset Management. Email: roland.rupprechter@rbvm.at. *Statement on the use of AI tools*: This paper was produced with the selective use of the AI tool Claude (Anthropic). The core elements of the content – including the research question, the objective, the methodology, the data analysis, all calculations, as well as the specialist knowledge and the layout – were produced entirely independently by the author. Under the author's guidance, Claude served as an assistant tool to support research, shorten text, verify derivations and cross-check sources. Some AI-generated text passages were thoroughly reviewed by the author and only incorporated once the content objectives had been met. Finally, the system was used for proofreading (spelling and academic style). The author takes full responsibility for the content of the paper.

[2] Thus consistently the publicly available reviews, cf. Dobusch and Sturn (2024) as well as Thaller and Mayr (2024); on the reversal in valuations, the published results for 2019-2022.

investment horizon, acquisition preferably during periods of weakness at a discount — and a liquidity reserve that is never sacrificed to the pursuit of return.

Keywords: Liquidity · Illiquid assets · Real estate · Private equity · Leverage ratio · Concentration risk · Signa.

JEL codes: G01, G11, G32, G33, R33.

Non-Technical Summary

In November 2023, the insolvency filing of Signa Holding marked the beginning of the largest corporate collapse Austria has ever experienced. A real estate and retail group whose assets had shortly before been put at some 27 billion euros disintegrated within a few weeks; across all proceedings, claims of some 27.6 billion euros were filed, and for many creditors it is becoming apparent that they will see only a small part of their money again. This paper asks, from the perspective of a financial analyst: would all of this have been avoidable if the group had held more liquidity — that is, available cash reserves?[3]

The answer falls into two parts. Yes — the collapse in its specific, chaotic form was triggered primarily by the absence of cash reserves: a bond of some 200 million euros falling due in the autumn of 2023 could not be serviced while assets worth billions stood on the books at the same time. No — liquidity alone would not have saved the group, because its business model rested on persistently low interest rates, a high use of debt and valuations that proved untenable once interest rates turned in 2022/23. More cash would have bought time; Signa would have been viable only with less debt, hedged interest costs and more defensive valuations.[4]

The paper describes in plain terms how the group was constructed — a web of some one thousand companies across several countries —, why this layering was chosen and what it cost; how the money for acquisitions and refurbishments was raised; and how intra-group rents, revaluations and new loans interlocked. The case is then compared with other assets that are difficult to sell, above all with private equity investments, which are similarly hard to value and similarly opaque.

The practical conclusion for investors: assets that are hard to exit can enrich, but only as partial commitments, with staying power, and ideally bought when others are forced to sell — at a discount during periods of weakness. Anyone who puts his wealth into a single illiquid idea with high leverage replicates precisely those structural misjudgements that ultimately led to the insolvency of the Signa Group. And the most important lesson applies to both, entrepreneurs and investors alike: liquidity is not an idle reserve that costs return — it is the condition for surviving bad times without becoming a seller at the worst possible moment.

[3] The analysis rests exclusively on publicly available sources classified as reputable. Individual participants — buyers, banks, investors and the persons acting — are deliberately described only by function and industry; figures are to be understood as approximate values.

[4] Cf. the references in footnote 2.

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1 Introduction

On 29 November 2023, Signa Holding applied to the competent commercial court for self-administered restructuring proceedings. What followed was not an orderly restructuring but a cascade: within a month the two principal property companies, Signa Prime and Signa Development, also filed for insolvency; in the course of 2024 the restructuring plans failed, and the proceedings were converted into bankruptcy. Across all proceedings, claims of some 27.6 billion euros had been filed by August 2025 — the largest insolvency in Austrian economic history. That a group whose properties ranked among the finest locations in Europe could disintegrate in this way raises the question that prompted this paper: would the collapse have been avoided had Signa held more liquidity?[5]

The question is more than a historical one. Signa is emblematic of an asset class that grew considerably during the years of low interest rates: assets that are hard to exit, whose valuation rests on appraisals rather than market prices, whose structures are difficult for outsiders to penetrate and whose returns are substantially levered by debt. Commercial real estate belongs to this class, as do private equity investments, closed-end funds, private lending and unlisted profit participation rights. For investors who entrust capital to such assets, the Signa case is an object lesson in what happens when illiquidity, concentration risk, valuation discretion and leverage come together — and interest rates turn.

Two clarifications of the question are in order. First, the question of liquidity is not a rhetorical one: it would be equally conceivable that the group foundered on a shortfall of substance and that any cash reserve would merely have postponed the date — the answer must therefore distinguish between trigger and cause, and it does so explicitly in Section 3.7. Second, the paper is a purely economic analysis: it deals exclusively with the financing and valuation construction; what is examined is why that construction as such came under pressure once its underlying assumption — persistently low interest rates — fell away. It is precisely this restriction that makes the case usable for investors: fragile constructions can be recognised only through one's own analysis.

The academic literature offers established findings on each of these ingredients. That market liquidity and funding liquidity reinforce one another and disappear together in a crisis was shown by Brunnermeier and Pedersen (2009); that fire sales depress prices precisely when the natural buyers are themselves in distress goes back to Shleifer and Vishny (1992, 2011). The smoothing of appraisal-based valuations is described by Geltner (1991) and Quan and Quigley (1991), the significance of the debt burden in a crisis by Fisher (1933) and Minsky (1992). For private equity, robust empirical work is available in Kaplan and Schoar (2005), Phalippou and Gottschalg (2009), Franzoni, Nowak and Phalippou (2012), Harris, Jenkinson and Kaplan (2014) and Nadauld, Sensoy, Vorkink and

[5] On the total of claims filed across all proceedings (27.6 billion euros, as at August 2025) cf. the press coverage of August 2025; (orf.at/stories/3403941) multiple filings of the same claim in several proceedings are included therein.

Weisbach (2019); the portfolio implications of illiquid assets are treated by Ang, Papanikolaou and Westerfield (2014).[6]

Methodologically, the paper understands itself as a factual case analysis from the perspective of a financial analyst. It draws exclusively on publicly available information about the Signa case — press releases of the creditor protection associations, published interim reports of the insolvency administration, press investigations, and reviews by supervisory authorities and research institutions. Individual participants — buyers, banks, investors and the persons acting — are deliberately not named but described only by function and industry; figures are to be understood as approximate values, and the paper contains no statements about individual conduct. The aim is the sober reconstruction of a causal nexus from which transferable rules for investing can be derived.

The paper is structured as follows. Chapter 1 (the present section) develops the question and the state of the literature. Chapter 2 lays the conceptual foundations: liquidity in its two manifestations, the valuation of illiquid assets, and the interplay of leverage and interest rate fixation. Chapter 3 reconstructs the Signa case — rise, structure, funding, valuation practice, collapse and realisation — and answers the counterfactual question about liquidity. Chapter 4 places Signa alongside other asset forms that are hard to exit, in particular private equity. Chapter 5 derives rules for investors from this, and Chapter 6 draws a twofold conclusion: for Signa and for the investor.

2 Liquidity, valuation and leverage: conceptual foundations

2.1 Market liquidity and funding liquidity

In the language of finance, liquidity denotes two related but distinct properties. Market liquidity is the property of an asset that it can be sold quickly, in a meaningful volume and without a substantial price discount; funding liquidity is the property of a debtor that it can make payments as they fall due and replace maturing financing. A listed share possesses high market liquidity; an inner-city department store does not: selling it takes months, the circle of buyers is small, and the achievable price depends on the seller's time pressure. Keynes (1936) described investors' preference for assets that can be sold at any time as liquidity preference and identified its price — the yield advantage of the illiquid: whoever forgoes saleability demands a premium in return.

Decisive for an understanding of crises is that both manifestations of liquidity condition one another. Brunnermeier and Pedersen (2009) showed how market liquidity and funding liquidity are coupled in a spiral: if prices fall, lenders raise their collateral haircuts, so assets must be sold, which depresses prices further and makes refinancing more expensive still.

[6] An overview of the valuation and financing of commercial real estate is given in the standard work by Geltner, Miller, Clayton and Eichholtz (2014); on the fragility of real estate vehicles that promise liquidity cf. Fecht and Wedow (2014).

Shleifer and Vishny (1992, 2011) worked out the core of the fire-sale problem: the natural buyers of a specialised asset — other real estate companies, other funds in the same asset class — are as a rule themselves forced sellers or short of capital in a crisis, so that assets pass to buyers outside the industry only at deep discounts. The sale of Signa's stake in a world-famous New York high-rise for some five million euros, combined with the waiver of an insolvency claim, will recur in Chapter 3 as a textbook example of this price formation.

For companies, a simple but hard rule follows from this: whoever finances illiquid assets with short-dated or callable debt is engaged in maturity transformation without the protections of a bank — without deposit insurance and without access to the central bank (Diamond and Dybvig, 1983). Its survival then depends not on the assets on the balance sheet but on the cash position at the next maturity date. Under insolvency law, illiquidity — not balance-sheet poverty — is the most frequent ground for opening proceedings: collapses occur on payday, not on the balance sheet date.

How high the price of time pressure can become may be shown by a simple consideration. A prime-location department store, valued at 500 million euros on the basis of capitalised rental income, will find no buyer within three months who accepts these assumptions: the circle of interested parties for such a specialised property comprises perhaps a dozen addresses across Europe, of which, in an industry crisis, the majority are themselves selling rather than buying. The remaining buyer knows the seller's position and bids accordingly. Discounts of a third to a half of the appraised value are, in such circumstances, not an anomaly but the price of haste — the realisation results of the Signa case in Section 3.6 will confirm this dramatically. Market liquidity is thus not a property of the asset alone but of the state of the market: Amihud and Mendelson (1986) showed that investors want to be compensated on a continuing basis for poor tradability; Pastor and Stambaugh (2003) added that liquidity is itself a risk factor which fails systematically in times of crisis.

2.2 The valuation of illiquid assets

Illiquid assets have no continuously observable market price; their valuation rests on appraisals and models. For real estate held as a financial investment, the international accounting standard IAS 40 permits recognition at fair value, the determination of which as a rule amounts to capitalising expected rental income. Two features of this valuation world matter for investors. First, smoothing: appraised values rely on past comparable cases and adjust only hesitantly to new market conditions, which is why reported value series for illiquid assets appear systematically too smooth and understate their risk (Geltner, 1991; Quan and Quigley, 1991). Second, discretion: the valuation incorporates assumptions about rents, vacancy and capitalisation rates that the party commissioning the appraisal can influence.[7]

How sensitively the income value reacts to the interest rate environment is shown by a rough calculation. A property with annual rents of 30 million euros is worth one billion euros at a capitalisation rate of three per cent; if the rate rises to four and a half per cent in the course of a turn in interest rates, the calculated value falls to 667 million — a third of the value disappears without the slightest change to the property or its rents. For an owner with low debt this is an unpleasant accounting entry; for an owner who has borrowed 800 million against the billion-euro value it is the end of the equity. The same calculation, with the sign reversed, had generated the revaluation gains of the preceding years: interest rates were the real valuer — the appraiser merely recorded them.

Together, both features generate a dangerous feedback loop with the financing. Rising appraised values increase reported equity and the borrowing base; additional credit can be raised against the higher value; the credit finances further acquisitions, whose prices support the next round of valuations. So long as interest rates fall and capitalisation rates fall with them, this cycle appears to be value creation. It is, however, reversible: if interest rates rise, revaluations turn into write-downs, loan-to-value ratios jump, and creditworthiness disintegrates at the same pace at which it was previously built up. Minsky (1992) described this endogenous transformation of sound financing into speculative and finally Ponzi-type financing as a general pattern of capitalist upswings; Fisher (1933) showed how, in a downswing, deleveraging and price declines chase one another.

2.3 Leverage, interest rate fixation and forced sales

Debt multiplies the return on equity in both directions; this has been textbook knowledge since Modigliani and Miller (1958) and would not on its own be worth a warning. Leverage becomes dangerous through its combination with the two properties of illiquid assets described above. On the one hand, a write-down hits levered equity disproportionately: at a leverage ratio of eighty per cent, a loss in value of twenty per cent wipes out the equity entirely. On the other hand, leverage forces action at the wrong moment: whoever breaches loan covenants on loan-to-value or interest coverage must post additional collateral or sell — and precisely at the moment when the market is least able to absorb (Shleifer and Vishny, 2011). Myers (1977) further showed that over-indebted companies can no longer finance even worthwhile projects, because new creditors would first have to service the legacy debt.

Within debt financing, the interest rate fixation determines how quickly a turn in interest rates feeds through to cash flows. Fixed-rate, long-dated financing gives the debtor time to adjust; floating-rate or short-term revolving financing transmits every increase in

[7] Under IAS 40, changes in fair value affect the income statement directly — revaluations generate distributable book profits without any inflow of cash.

policy rates to interest expense within months. A property portfolio whose rental income grows only sluggishly under its contracts tolerates such transmission poorly: interest coverage falls, the valuation falls at the same time because of rising capitalisation rates, and both covenants of a typical loan documentation are breached in the same quarter. The years 2022 and 2023, in which the European Central Bank raised the deposit facility rate in ten steps from minus 0.5 to 4.0 per cent, were the moment of truth for such financing profiles — and Chapter 3 shows that Signa carried this profile.[8]

Hedging against a rise in interest rates is not an art but a craft: interest rate swaps and caps belong to the standard toolkit of any real estate financing, and their price is low compared with the risk hedged — so long as they are entered into in calm times. Whoever forwent hedging during the low interest rate phase saved a few tenths of a percentage point and, mostly unwittingly, sold an option on his own survival in exchange. After the turn in interest rates the relationship reversed: hedging was now unaffordable or useless, because the damage had already occurred. The parallel to the cash reserve applies here too: both are precautions that can be acquired only before a crisis and become unaffordable in one.

2.4 Concentration risk

A fourth characteristic deserves separate treatment because it multiplies the effect of the others: concentration. Since Markowitz (1952) it has been known that diversification is the only means of reducing individual risks without sacrificing return; illiquid assets resist this means in two ways. First, their unit sizes enforce concentration: an inner-city department store, a development project, a corporate stake each tie up amounts that no longer permit genuine diversification in the portfolio of a mid-sized investor. Second, the apparently different positions frequently concentrate on the same risk driver: whoever holds prime-location department stores, project developments and retail chains holds the same bet three times over — on inner-city retail and on low interest rates. In this scenario, concentration risk results not from the quantitative structure of the properties but rather from the homogeneity of the premise underlying them. Aggravating this is the fact that concentration in illiquid assets cannot be corrected. The holder of an oversized equity position can reduce it on any trading day; the holder of an oversized real estate or participation cluster cannot — he can only hope that the reduction will not be necessary, or force it at the price of fire-sale discounts. Concentration, illiquidity and leverage thus form a chain in which each link tightens the next: concentration makes the individual loss of value existential, illiquidity prevents evasion, and leverage shortens the time that would remain for evading. The Signa case will show how tightly this chain draws in an emergency.

From all of this follows the yardstick against which the Signa case is measured in Chapter 3. An owner of illiquid assets is crisis-proof if he satisfies four conditions at once:

[8] The ECB raised the deposit facility rate between July 2022 and September 2023 from -0.5 to 4.0 per cent — the fastest tightening since the existence of the monetary union.

a cash reserve and undrawn credit lines that cover several years of maturities even with capital markets closed; a leverage ratio that leaves equity remaining even after a severe revaluation; an interest rate fixation that allows interest rate shocks to arrive only with a long delay; and staggered maturities without clustering. If one of these conditions is missing, a price decline becomes a liquidity event; if several are missing, the liquidity event becomes an insolvency.

3 The Signa case

3.1 Rise and business model

The Signa Group grew out of a real estate company founded in January 2000 in an Austrian provincial capital. Its founder pursued a clearly defined strategy from the outset: the acquisition of inner-city properties in absolutely prime locations — shopping streets, department stores, luxury quarters — whose value was to be increased through refurbishment, repositioning and higher-value letting. In 2010, the company that later became Signa Prime Selection AG was created as a vehicle for the prime-location holdings, initially with a portfolio worth some 750 million euros; in parallel, Signa Development Selection AG bundled the project developments. In the years that followed, the group grew into one of the largest private real estate holders in Europe: the portfolio included a luxury quarter with a grand hotel in the heart of Vienna, widely known department stores in the best locations of Berlin, Munich and Hamburg, a stake in a world-famous skyscraper in Manhattan and, on the Elbe in Hamburg, the most ambitious high-rise project in Germany.[9]

From 2013 a second pillar was added that fundamentally changed the group's risk profile: retail. Signa progressively acquired two long-established German department store chains and merged them into the country's largest department store group; added to these were the operator of several luxury department stores, an Austrian furniture chain, a sporting goods retailer, Swiss department stores and — together with a retail group from the Far East — a British luxury department store group for some four billion euros. Online sports retailing was bundled in a subsidiary listed on the New York stock exchange. A construction had thus emerged in which the group's real estate companies in part controlled their own largest tenants — a connection whose valuation consequences are treated in Section 3.4. The department store business itself was structurally weak: the large department store group went through three insolvencies between 2020 and 2024.

The entrepreneurial achievement that earned the group its reputation lay in repurposing: the department store site became the luxury quarter with hotel, retail and

[9] On the company history cf. the detailed press reconstructions of 2023; the group's total assets were most recently put consistently at some 27 billion euros.

offices; the dusty retail property became the prime-location address with international tenants. A luxury quarter in the heart of Vienna demonstrated the pattern early and successfully. Such repurposing genuinely creates value — but it is capital-intensive, takes years, yields little in the meantime and rests on assumptions about future rents that only the completed operation confirms. A group that pursues many such projects at once resembles a developer who has already borrowed against all the harvests of future years: the value creation is real, but it is ahead of its time — and the financing of this advance performance determines to whom it ultimately belongs.

The rise was carried by the conditions of the decade after the financial crisis: zero and negative interest rates lowered financing costs and the capitalisation rates with which property income is valued, so that prime-location properties reached higher appraised values year after year. Signa exploited these conditions more consistently than most competitors — with a high leverage ratio, neutral to ambitious valuations and a pace of expansion that continually required new funds. How the funds came in, what structure absorbed them and how valuation and borrowing interlocked is shown in the following sections.

3.2 Group structure and layering

The Signa Group was not a group in the legal sense but an association of — according to the organisational chart prepared by the insolvency administration — some one thousand companies spread across Austria, Luxembourg, Liechtenstein and Switzerland. At the top stood not a listed parent company but private foundations in the founder's orbit; below them Signa Holding GmbH as the participation hub; below that the sub-groups Prime, Development and Retail, each as a stock corporation with its own minority shareholders; and below those, for each property, separate property-holding and project companies, frequently stacked across several intermediate levels. Table 1 names the most important entities and the status of their proceedings.[10]

[10] The group's organisational chart prepared by the insolvency administration comprises, according to the review by the Chamber of Labour, 46 pages in A3 format with some 1,000 companies; creditor protection representatives counted some 400 companies in the immediate vicinity of the holding company alone. Sources: awblog.at (2024); ksv.at (2023).

Table 1: Principal entities of the Signa Group and the status of their proceedings

Entity	Function	Status of proceedings
Founder's family private foundation	Ownership level	Insolvent since March 2024
Founder's second private foundation	Ownership level	Insolvent since 2026
Signa Holding GmbH	Participation management, group parent	Insolvency 29.11.2023; bankruptcy since April 2024
Signa Prime Selection AG	Prime-location standing properties	Insolvency 28.12.2023; bankruptcy since October 2024
Signa Development Selection AG	Project development	Insolvency 29.12.2023; bankruptcy since December 2024
Signa Retail (department store and retail holdings)	Department stores and retail	Insolvencies 2023/2024, disposals
Signa Sports United (listed, New York)	Online sports retail	Insolvency October 2023

Sources: Publicly reported information on the proceedings (2023-2026); own presentation.

What such a cascade looked like in an individual case can be traced along the path of a single property: the property sat in its own property-holding company; its shares were held by an intermediate holding company, frequently together with project-specific co-investors; the intermediate holding belonged to one of the sub-group stock corporations; whose shares were held — alongside the minority shareholders — by Signa Holding; and the holding company itself was owned by foundations whose beneficiaries and assets were not publicly inspectable. Between these levels flowed loans, guarantees, dividends and inter-company settlements that no published set of accounts brought together. Whoever lent as a creditor at one level knew neither the obligations of the levels above nor the claims of the levels below — he knew his own segment and had to trust the overall picture that the group itself drew.

Why this layering? Four motives can be substantiated from the publicly available analyses. First, the separation of liability customary in the real estate industry: each property sits in its own company whose loans have recourse only to that property; if a project fails, the rest of the group remains unaffected. The creditor protection associations noted, however, that with its cascades of holding companies Signa clearly exceeded what is customary in the industry. Second, the tailored involvement of investors: large investors could take stakes at specific levels — Prime, Development, individual projects — in part with contractual redemption rights, which would have been made more difficult by uniform group structures. Third, tax structuring, for instance via a corporate tax group to offset project losses. Fourth — emphasised by critics — the limitation of insight: despite participations worth billions, the holding company qualified under the size thresholds as a small company and was therefore subject to neither a consolidated accounts requirement nor an audit requirement; a consolidated overview of the assets, liabilities and cash flows of the group as a whole did not exist publicly. That the legal order permits such a classification is discussed in the reviews of the case as a regulatory gap.[11]

The advantages of this construction are real from the owner's perspective: risks remain contained property by property, investors can be won flexibly and discreetly, financing can be optimised company by company, and entrepreneurial freedom of decision remains undivided. The disadvantages were borne by others — until, in the collapse, they fell back on the group itself. Creditors and minority shareholders could not discern total indebtedness; intra-group loans and guarantees — at the holding company alone, intra-group liabilities of some 1.5 billion euros and guarantees of some 5 billion euros were filed — did after all connect the supposedly separate entities in an emergency; and when confidence waned, there was no authority that could have steered the group as a whole or even seen through it. The layering, an advantage of design in good times, became an accelerator of the loss of confidence in the crisis.[12]

The organisational structure was moreover characterised by a specific governance architecture. The holding company was not supervised by a supervisory board under stock corporation law but accompanied by an advisory board on which, alongside investors, prominent figures from politics and business sat; the founder himself formally held no corporate office in the operating companies and yet acted, according to consistent reports, as their defining figure. For providers of capital this meant a double blurring: formal responsibility lay elsewhere than actual decision-making power, and the body that radiated prestige and confidence did not possess the inspection rights and duties of a corporate control organ. A governance order that rests essentially on reputation and informal influence proves itself above all in stable phases; in the escalation of November 2023 there was no body equipped with the powers and the duties to steer the group as a whole.

The contrast with listed competitors makes the price of the construction visible. A listed owner must report on a consolidated basis quarterly, disclose its leverage and interest ratios and submit to daily valuation by the stock market; in the downturn of 2022/23 the market acknowledged this with share price losses and forced early countermeasures — dividend cuts, disposals, capital increases. Large listed European owners went through deep write-downs in this way without becoming illiquid — with exceptions to which Section 3.7 returns. The Signa group knew no such early-warning market: its valuation was carried out annually by commissioned appraisers, its ratios remained unconsolidated, and the correction that the market administered to others in monthly doses hit it in the end undivided on a single November day.

Finally, it is remarkable who took stakes in this group: not anonymous retail investors but experienced entrepreneurs and institutional addresses. That even highly professional

[11] An international rating agency described the structure in December 2023 as “opaque and complicated”; the head of the national financial market authority criticised in 2025 that the absence of consolidated accounts was not effectively sanctioned.
[12] Source: ksv.at, press information on the holding company proceedings (2024-2026).

providers of capital evidently arrived at differing assessments of the risks is among the instructive observations of the case: the participation of renowned co-investors is no substitute for one's own examination, because limited transparency constrains the information available to all participants alike.[13]

3.2.1 Layered group architectures in the wider economy

The group's participation architecture was exceptional in its extent, not in its principle. Multi-tier structures of subsidiaries, special purpose entities and intermediate holding companies belong to the standard repertoire of large corporate groups, and the range of motives extends from indisputably legitimate structuring of liability, succession and tax to constructions whose limited disclosure makes it harder for providers of capital to assess risk. A brief look at related manifestations places the case in context — and sharpens the yardstick for when layering becomes a risk factor for investors.

From the same industry, the case of the Luxembourg-domiciled Adler Group is documented, whose network of subsidiaries and special purpose entities was spread across several countries. In October 2021 a short seller alleged that assets were being overstated and actual indebtedness concealed through transactions with related parties. The company rejected the allegations; the forensic special investigation subsequently commissioned was, however, unable to dispel them and resulted in April 2022 in a disclaimer of opinion by the auditor, and the German accounting enforcement authority established accounting errors in several proceedings — among them an impermissible consolidation through which the group's total assets for 2019 were overstated by some 3.9 billion euros. In substance, this debate resembles the one that also accompanied the Signa construction.[14]

Beyond the real estate industry, numerous very large owner-managed family businesses in the German-speaking world maintain highly subdivided structures, frequently in combination with foundations. The business press cites as an example the corporate network around the drugstore entrepreneur Erwin Müller, whose limited partnerships were for years managed by a British limited company as general partner, before this function passed in 2019 to a holding company domiciled in Vaduz. The motives regularly cited for such constructions are predominantly legitimate in nature: structuring of liability, succession and tax planning, and the avoidance of consolidated disclosure, which denies competitors insight into earnings position and strategy.[15]

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[13] The industrial family's holding company acquired its stakes in 2019 and increased them in 2019 and 2022; after a full write-down it reported a cumulative net loss of some 272 million euros. The industrial foundation put its fully written-off commitment at one to two per cent of its assets of some 17.6 billion euros.

[14] On the short seller report of 7 October 2021, on the auditor's disclaimer of opinion of April 2022 and on the error findings of the German accounting enforcement authority of 18 November 2022 (2019 consolidated accounts) and of 27 December 2023 (2020 and 2021 consolidated accounts) cf. the publications of BaFin at bafin.de and the accompanying press coverage. The company disputed the allegations and announced legal remedies against the error findings.

[15] On the transfer of the general partner from London to Vaduz in 2019 cf. the coverage of April 2019 (inter alia b4bschwaben.de, 23 April 2019; handelsblatt.com). The motives of those involved are not conclusively documented in public.

In parts of Asia, multi-tier interlocking is not the exception but the organising principle: South Korean conglomerates such as Samsung or Hyundai — the so-called chaebols — link dozens of listed and private companies through cross-shareholdings, so that founding families exercise control over the entire group with comparatively small capital stakes. Here the structure serves to secure control across generations; its costs are borne essentially by minority shareholders, whose shares the market regularly values at a conglomerate discount.[16]

How completely the complexity of such architectures often reveals itself only in collapse is shown by two thoroughly examined historical cases: the American energy group Enron used, up to 2001, hundreds of special purpose entities through which liabilities and risks were held off the group balance sheet (Healy and Palepu, 2003); at the German payment services provider Wirecard, the collapse of 2020 was associated with a barely penetrable web of third-party acquirer companies located above all in Asia, whose examination is documented by an independent special investigation of April 2020 and a parliamentary committee of inquiry. Both cases are the subject of extensive judicial and academic examination.[17]

Two things follow from this for placing the case examined here in context. Layering as such is not a warning sign — it is a widespread and in many cases legitimate structuring practice. It becomes a risk factor for providers of capital only in combination with limited disclosure, high leverage and illiquid assets: the corrective yardstick from outside is then absent while obligations grow within. It was precisely this combination that distinguished the group examined here from most of the examples named.

3.3 Raising funds: the financing of acquisitions and projects

The group's capital requirement was enormous: the acquisition of properties in prime locations was characterised by a capital-intensive price structure. They were refurbished at great expense and yielded no or only low income during the refurbishment. The requirement was met from a range of sources side by side, which Table 2 sets out. The core consisted of secured bank loans at the level of the individual property companies; according to the national central bank's assessment, some 60 per cent of the Signa loans were secured at the time of the collapse. Added to these were bonds and promissory note loans — issued in part through Luxembourg financing companies —, equity increases at Prime and

[16] On securing control through pyramid and cross-shareholdings in family-controlled corporate groups and on the resulting costs for minority shareholders cf. Bae, Kang and Kim (2002) as well as Almeida and Wolfenzon (2006).
[17] On Enron cf. Healy and Palepu (2003); on Wirecard the report on the independent special investigation of 27 April 2020 as well as the final report of the 3rd Committee of Inquiry of the German Bundestag in its 19th legislative period (Bundestag printed paper 19/30900, June 2021).

Development, shareholder loans and intra-group credit, and subordinated profit participation rights.[18]

Table 2: Sources of funding of the Signa Group with documented examples

Source	Form	Documented examples
Equity from large investors	Capital increases at Prime and Development	October 2017: some EUR 1bn; July 2022: some EUR 750m; industrial family holding company: full write-down, cumulative net loss of some EUR 272m
Bank loans	Secured property financings per property-holding company	Some 60% of loans secured; exposures of a Swiss bank as well as Austrian and German banks
Bonds and promissory note loans	Issues, in part through Luxembourg companies	Signa Development: EUR 300m outstanding (mid-2023); Signa Prime: EUR 200m bond maturing November 2023
Intra-group financing	Loans and guarantees between the entities	Holding: some EUR 1.5bn intra-group; some EUR 5bn of guarantees filed
Profit participation rights	Subordinated capital at a fixed rate of interest	After the opening of insolvency proceedings: up to EUR 300m (Prime) and EUR 50m (Development) at 9% to finance the estate

Sources: Publicly reported information on the proceedings, from the central bank and from rating agencies; press reports; own presentation.
Notes: The profit participation rights in the final row served to finance the proceedings already opened and stand as an example of the group's forms of capital.

Two peculiarities of this funding deserve emphasis. The first is the ranking of claims: bank loans had secured recourse to the properties, bondholders and holders of profit participation rights ranked behind them, the investors in the stock corporations behind those, and the holding company as shareholder last. In insolvency this ranking unfolded its full severity: in April 2024 the holding company itself declared that, as a mere participation company, no significant value was to be expected from the subordinated positions. The second peculiarity is the ongoing outflow of funds to the owners: Signa Prime distributed a dividend of some 201 million euros for 2019 and of some 225 million euros for 2021 — in years whose reported profits consisted substantially of unrealised revaluation gains, while interest expense already reached some 373 million euros in 2021, around 85 per cent of revenue of some 438 million euros.[19]

The role of the banks in this structure deserves separate consideration. The property financings came from a broad circle of European institutions; according to rating reports and the press, a Swiss bank with more than 600 million francs, as well as Austrian and German banks each with three-digit million amounts, were among the largest addresses.

[18] Known bank exposures according to rating reports and the press: a Swiss bank with more than 600 million francs, two large Austrian banks with some 750 and some 600 million euros respectively, an Austrian regional bank with some 200 million euros, and several German banks. Sources: immofokus.at (December 2023); derstandard.at/story/3000000197677.
[19] On the dividends and revaluations cf. consistent press analyses of the years 2020 to 2023; on the withdrawal of the holding company's restructuring plan the coverage of the proceedings of April 2024. Sources: bloomberg.com (6 October 2020); trend.at (April 2024).

The security at property level protected the institutions largely in the event — the central bank saw no immediate stability risk in November 2023 —, yet it was precisely this security that shifted the unsecured risk onto bondholders, holders of profit participation rights and investors at the upper levels. The financial market authority later stated that it had monitored the group specifically since 2021 and had limited the exposures of the supervised Austrian banks; it is precisely this shift of financing to foreign institutions, insurers and private placements that belongs to the picture of a structure that eluded overall supervision just as it eluded any overall view.[20]

From the perspective of financing theory, this combination — high secured leverage at property level, unsecured intermediate financing at group level, distributions out of book profits — is the blueprint for the emergency described in Chapter 2. Jensen (1986) argued that debt creates discipline because it forces managers to service payment promises out of genuine cash flows; the discipline fails, however, if payment promises can be serviced out of ever new rounds of financing. It is exactly this pattern that the risk-analytical review of the case describes: from 2018 onwards, debt service clearly exceeded the group's operating cash flow — the gap was closed by the next round of funding. Such a system depends on uninterrupted access to the capital market, which is why it carries an inherent structural risk of default.[21]

Why did experienced investors subscribe? The answer belongs to the case analysis, because it explains how the system sustained itself. The group offered what makes private market investments desirable: access to properties that are individually unattainable; the company of prominent co-investors as an apparent examination by third parties; a long series of reported successes; and valuation trajectories that seemed to know only one direction. Each of these motives is understandable, and each substitutes trust for examination. Fund research knows the process: capital flows after the reported successes of the past, and the inflow itself feeds the next reported successes until the capacity of the strategy is exceeded (Kaplan and Schoar, 2005).

3.4 Valuation practice: the buy-lease-revalue-borrow spiral

The interaction of property ownership and own retail operations opened up to the group a structuring possibility that is described in press investigations and analyses as the actual driver of growth: the spiral of purchase, letting to its own retail companies, revaluation and renewed borrowing. The sequence follows the valuation logic of the income approach: if a department store is let to the group's own retail chain at a rent on the upper end of the market or above market levelsand with a long contractual term, the capitalised income

[20] On the targeted monitoring of the group by the financial market authority from 2021 and on its criticism of the absent framework of sanctions for consolidated accounts not submitted cf. its public statements of November 2025; on the assessment of the central bank (no direct stability risk; some 60 per cent of the loans secured) its statement of November 2023. Sources: trend.at (November 2025); derstandard.at (November 2023).

[21] Source: Thaller and Mayr (2024).

value of the property rises; the higher appraised value permits higher loans; the loans finance the next purchase. Economic policy reviews of the case describe this interaction explicitly as the core of the business model.[22]

The practice can be documented in remarkable detail. According to a detailed press investigation of December 2023, the Munich store paid an annual rent of some 25.9 million euros in 2021 — with estimated revenue of 130 million euros, a rent burden of some 20 per cent, which a retail consultant interviewed described as “at the absolute limit of what is bearable”; for the Hamburg store some 17 per cent and for the Berlin store some 13 per cent of revenue were calculated. The contracts provided for further increases: the combined annual rent of the three stores of some 81 million euros in 2023 was contractually to grow to more than some 112 million euros by 2045. The operator of the luxury department stores itself cited “exorbitantly high rents” as the main reason when filing for insolvency in January 2024; from the environment of the large department store group it was reported that at market-conforming rents its result would be 70 million euros higher. The group's legal representatives rejected the allegations of excessive valuations as devoid of any factual basis; a judicial clarification of the valuation questions is still outstanding.[23]

Table 3: Selected key figures of Signa Prime Selection AG

Year	Revaluation result	Result for the year	Dividend
2019	+EUR 933m	Profit (doubled by revaluation)	EUR 201m
2021	some +EUR 1,000m	+EUR 732m	EUR 225m
2022	Write-downs	some -EUR 1,000m	—

Sources: Published financial statements according to consistent press analyses (2020-2023); own presentation.
Notes: All figures are approximate. Signa Prime's interest expense reached some EUR 373m in 2021 on revenue of EUR 438m; without the revaluation result, 2021 would have been loss-making.

In Signa Prime's financial statements the valuation side of the spiral is immediately visible; Table 3 summarises the key figures. For 2019 the company reported revaluations of some 933 million euros, which doubled the profit for the year and carried the dividend mentioned; for 2021 a reported profit of some 732 million euros stood against a revaluation result of some one billion euros — without the revaluation the year would have been loss-making. The risk-analytical review records that the valuation effect in 2019 amounted to some three times revenue. With the turn in interest rates the sign reversed: in 2022 Signa Prime posted a loss of well over one billion euros as a result of write-downs, and Signa Development lost some 317 million euros on write-downs of some 365 million euros. The appraised value that had carried the rise now carried the fall.[24]

[22] Source: Dobusch and Sturn (2024).
[23] Press investigations of December 2023; the rent figures were reported consistently by several media outlets; on the tenant's stated grounds, the insolvency coverage of January 2024. Source: handelsblatt.com (12 December 2023). This is reproduced as the state of reporting, not as an established fact.
[24] Critical comments on valuation practice came inter alia from representatives of the creditor protection associations (“massive overstatement”) and from accounting law experts on the scope for discretion in valuation under IAS 40.

A marginal note of fundamental significance concerns the accounting regime itself. Under Austrian commercial law, the prudent principles of historical cost and the lower of cost or market apply to real estate: revaluations above cost are inadmissible, and book profits from mere expectations of value do not arise. The group companies, however, reported under international standards, whose fair value approach lifts revaluations directly into the income statement. After the collapse, creditor protection representatives argued openly for a return to the prudence principle. One need not follow this plea in its full breadth — the fair value approach has informational merits — in order to acknowledge the lesson: distributions and bonuses that attach to unrealised fair value gains transform an accounting opinion into genuine outflows of funds. What was intended as information was treated as cash — and the cash was missing in the end.

In the interest of academic integrity, the limitations of data-based verifiability must be set out. Publicly documented are the rent levels of individual stores named, the revaluation results and dividends in the financial statements, and the tenant's own statement that the rent burden was a ground for insolvency; not publicly documented are the intra-group contractual terms in detail, the property-level loan-to-value ratios and the precise share of floating-rate liabilities. The account given in this paper therefore rests on the interplay of the documented individual pieces, which is unambiguous in its direction but open as to its exact magnitude. For the investor's judgement, however, the direction alone suffices: a valuation basis whose most important assumption arises in one's own house deserves the discount of doubt — irrespective of where, between realistic, ambitious and untenable, the truth lay in the individual case.

The academic assessment of this practice is sober: it is the business application of what Chapter 2 described in the abstract. Appraised values react sluggishly and are dependent on discretion (Geltner, 1991; Quan and Quigley, 1991); intra-group leases shift the scope for discretion further in the owner's favour, because the rent — the most important valuation assumption — arises not in the market but at the negotiating table of the same group. So long as capitalisation rates fell, both effects added up to apparently effortless value creation; with the turn in interest rates the same contracts became burdens that drove the tenant into insolvency and deprived the landlord of his valuation basis. It is the Minsky sequence in pure form: sound financing became speculative, and speculative financing became financing that could be serviced only through new funds and new revaluations (Minsky, 1992).

3.5 The turn in interest rates, maturities and the collapse

The turn in interest rates in 2022 and 2023 struck the group at all its sensitive points at once. Rising capitalisation rates depressed appraised values and with them the borrowing base; rising construction and energy costs made ongoing projects more expensive; and rising financing costs struck a group whose payment obligations had already been covered only by new rounds of funding during the low interest rate period. The precise share of floating-rate or short-term revolving liabilities is not publicly documented; the available analyses agree, however, that the business model depended on persistently low interest rates and that the tightening of monetary policy was decisive. The strain becomes visible in Signa Development's interim figures: its cash holdings fell in the first half of 2023 from some 125 to some 32 million euros, while the portfolio value fell from three to 2.1 billion euros. [25][26]

The maturity profile aggravated matters. The group's liabilities were not spread evenly over the years but concentrated in 2023 to 2026: the Prime bond of some 200 million euros maturing in November 2023, a Development bond issued via Luxembourg expiring in 2026, and in between revolving project financings whose extension had been a formality during the low interest rate period and now became a case-by-case negotiation with more risk-averse lenders. Maturity clusters are the twin form of concentration risk on the liabilities side: they bundle the refinancing requirement into one window of time and make survival dependent on the state of the market in precisely that window. The window of 2023/24 was the worst in fifteen years.[27]

The market environment aggravated the situation from outside. The European commercial real estate market was in 2023 undergoing its sharpest correction since the financial crisis; the European Central Bank devoted a separate special feature to real estate markets in an environment of high financing costs in its Financial Stability Review of November 2023 (ECB, 2023, Special Feature B). In Austria the share of non-performing commercial real estate loans rose, according to the national central bank, from some one per cent in mid-2021 to more than four per cent in mid-2024, and for 30 per cent of the loans the loan amount exceeded the value of the collateral or collateral was absent. In such an environment, follow-on financing on the old terms was out of the question: access to the capital market, on which the group's financing model rested, closed for the entire industry — and first of all for the most highly levered and least transparent participant.[28]

The autumn of 2023 brought the escalation in rapid succession, which Table 4 arranges chronologically. In October the listed sports retail subsidiary filed for insolvency; at the beginning of November the shell construction of the Hamburg high-rise project was halted because the building contractor's invoices had not been settled; shortly afterwards the founder handed the chairmanship of the advisory board to a renowned German restructuring expert. The immediate test came from a Signa Prime bond of some 200 million euros that fell due at the end of November and could not be serviced out of available

[25] Half-year figures of the development company for 2023, published in early November 2023 and cited according to press reports (inter alia cash.ch, 16 November 2023).
[26] Analysts at an international major bank put the group's liabilities to banks and investors at some 13 billion euros; (costar.com/article/771691919) an official aggregate figure does not exist because of the absence of group consolidation.
[27] The bond of Signa Development Finance S.C.S. (Luxembourg, coupon 5.5 per cent) was due in July 2026; the Prime bond of some 200 million euros became the immediate trigger of the crisis in November 2023.
[28] Central bank analysis of commercial real estate loans of September 2024; the figures relate to the Austrian banking sector as a whole, not to individual borrowers. Source: oenb.at, blog post of 20 September 2024.

liquidity — at a group whose assets stood on the books at some 27 billion euros. Attempts to obtain bridge funding from existing investors or new providers of capital within weeks foundered on mutual distrust and on the impenetrability of the structure: no one could examine, in the time available, what he would be liable for. On 29 November 2023 the holding company's insolvency application to the competent commercial court followed, and at the end of the year those of Prime and Development.[29][30]

Table 4: Chronology of the collapse of the Signa Group

Date	Event
July 2022 to Sept. 2023	ECB raises policy rates in ten steps; write-downs in the commercial real estate market set in
Oct. 2023	Insolvency of the sports retail subsidiary; construction halt at the Hamburg high-rise project in early November
Nov. 2023	Chairmanship of the advisory board passes to an external restructuring expert; Signa Prime's maturing EUR 200m bond becomes an acute liquidity problem
29.11.2023	Insolvency application by Signa Holding (self-administered restructuring proceedings before the competent commercial court)
28./29.12.2023	Insolvency applications by Signa Prime and Signa Development
Jan. 2024	Third insolvency of the large department store group; insolvency of the luxury department store operator ("exorbitantly high rents")
March 2024	Bankruptcy over the founder's private assets; insolvency of his family private foundation
Apr. 2024	Holding withdraws its restructuring plan (bankruptcy); sale of the Berlin department store property to a retail group from the Far East (some EUR 1bn); takeover of the large department store group by an investor group from the retail sector
Oct. 2024	Signa Prime's restructuring plan definitively fails (supreme court) — bankruptcy; sale of the British department store stake to a Gulf sovereign wealth fund
Dec. 2024	Signa Development also in bankruptcy (supreme court)
March 2025	Sale of the stake in a world-famous Manhattan high-rise for some EUR 5m together with a waiver of claims
Oct. 2025	Framework agreement of the City of Hamburg on the high-rise project on the Elbe (some EUR 595m); sale of the Vienna grand hotel fails
2026	Start of the sale process for the Vienna luxury quarter; realisation of the holding's assets largely completed

Sources: Publicly reported information on the proceedings and press information; own compilation, 2023 to 2026 (inter alia iz.de; ksv.at; orf.at; tagesspiegel.de; businesswire.com; hessenschau.de; private-banking-magazin.de; 5min.at; extrajournal.net; schuhkurier.de).

For the sake of completeness it should be recorded what was attempted in those November weeks and why it did not succeed. The restructuring expert who had been called in sought bridge financing in the three-digit million range within days — from existing investors, from banks, from private equity firms. The talks foundered on a condition that

[29] Sources: iz.de (29 November 2023); finanzen.at (28 December 2023); orf.at/stories/3344217.

[30] Illiquidity thus occurred at the level of individual maturities, not as balance-sheet over-indebtedness of the assets as a whole — the hallmark of a liquidity and confidence crisis on the pattern of Brunnermeier and Pedersen (2009).

every professional provider of capital sets and that the group could not meet: robust, consolidated figures in the time available. Whoever does not know how many liabilities stand above, below and alongside his own position provides no fresh money. The opacity that had granted scope for structuring in the good years became, in the decisive week, the essential obstacle to stabilisation: that would have required the group's asset and liability position to be presented robustly in the time available — which, according to consistent reports, was no longer achieved.

3.6 Realisation, creditor recovery rates and proceedings

The wind-down confirmed what the theory of fire sales leads one to expect: assets that stood on the books at peak valuations realised, under time pressure and in a weak market, only fractions of those values. The most striking example is the stake in a world-famous high-rise in Manhattan, which passed to the co-shareholder for some five million euros — combined with the waiver of an insolvency claim of some 50 million euros; Shleifer and Vishny (1992) would have predicted the buyer precisely: the only one who knew the property and could take it over. The Berlin department store property went for some one billion euros to a retail group from the Far East, the British department store stake to a Gulf sovereign wealth fund; the sale of the Vienna grand hotel initially failed, the luxury quarter was still up for sale in the summer of 2026, and the framework agreement of the City of Hamburg for some 595 million euros covering some 48 per cent of the usable floor space — the lower twelve storeys — had not yet been completed in August 2026. [31][32][33][34]

Correspondingly hard outcomes are emerging for the creditors. Table 5 sets the filed against the recognised claims in the main proceedings. The recovery rate of at least 30 per cent initially offered in Signa Prime's restructuring proceedings failed with the conversion into bankruptcy; the insolvency administrator warned that creditors might receive less. For individual property companies, creditor protection representatives expect no recovery at all. In the founder's personal bankruptcy, filed claims of some 2.7 billion euros stand against recognised claims of only some 46 million euros. How much will flow in the end will be shown only by the final distributions; the proceedings will occupy the courts for years to come. [35][36]

[31] On the high-rise stake cf. the coverage of March 2025; on the Elbe high-rise the framework agreement of October 2025 and the reports of August 2026 on outstanding conditions. Source: private-banking-magazin.de (14 October 2025).

[32] Source: hessenschau.de (5 March 2025).

[33] Sources: tagesspiegel.de (11 April 2024); orf.at/stories/3372198 (October 2024).

[34] Sources: 5min.at (30 October 2025); extrajournal.net (27 May 2026).

[35] Sources: ksv.at (August 2025); nachrichten.jetzt (August 2026, eighth interim report of the development company).

[36] On the minimum recovery rate of 30 per cent offered in Signa Prime's restructuring proceedings and on the insolvency administrator's assessment that less was to be expected in bankruptcy cf. the coverage of 31 October 2024. Sources: orf.at (October 2024); handelsblatt.com (October 2024).

Table 5: Filed and recognised claims in the main proceedings

Proceedings	Filed (EUR bn)	Recognised (EUR bn)	As at
Signa Prime Selection AG	11.8	some 5.0	Aug. 2025
Signa Holding GmbH	8.39	2.76	May 2026
Signa Development Selection AG	2.59	some 1.7	Aug. 2026
The founder (personal bankruptcy)	2.689	0.046	Aug. 2025
Founder's family private foundation	2.36	0.131	Oct. 2025

Sources: Publicly reported information on the proceedings; reports of the insolvency administration; own presentation.

Notes: All figures are approximate and based on interim positions. Claims may be filed in several proceedings at the same time; the sums are therefore not additive. Levels of recognition are interim positions.

The aftermath of the realisation also confirms the magnitude of the loss in value. At the holding company, whose participations once formed the roof of the group, the insolvency administration reported in May 2026 that realisation was largely complete — with proceeds of some ten million euros from vehicles, trademarks and naming rights, supplemented for the time being by some 9 million euros from avoidance actions; further avoidance claims for more than 160 million euros were pending. Ten million euros of realisation proceeds at a level to which assets worth billions had been attributed: the difference between the book value of a subordinated cascade of participations and its market value in an emergency cannot be quantified more clearly. For the economic assessment it is immaterial how much of this is attributable to market decline and how much to excessive initial valuations — the investor bears both.[37]

One special case of realisation deserves separate mention because it demonstrates the most unfortunate manifestation of illiquidity: the half-finished project. At the construction halt, the high-rise on the Elbe stood as a shell of some one hundred metres — too far advanced to be sold as land, too unfinished to carry income, and more expensive with every month of standstill through securing, interest and expiring warranties. The framework agreement concluded in 2025 with the City of Hamburg for some 595 million euros covering some 48 per cent of the usable floor space had still not been completed in August 2026. A finished prime-location property will, if need be, find its buyer at a discount; a half-finished one finds him only once someone is willing to finance completion — the most illiquid asset is the one that has been begun.[38]

On the equity side the picture is already unambiguous. The industrial foundation wrote off its participations in Prime and Development in full; the logistics entrepreneur publicly put the loss on his commitment at some 500 million euros; the industrial family's holding company reported, after a full write-down, a cumulative net loss of some 272 million euros.

[37] Figures according to the sixth report of the insolvency administration of Signa Holding (May 2026) as reported in the press. Source: schuhkurier.de (4 May 2026).

[38] On the state of negotiations in August 2026 cf. the Hamburg coverage; the continuation of construction announced for the summer of 2026 had not taken place by then.

All of this involuntarily confirms the rule on position size from Chapter 5: for the industrial foundation, for example, the commitment amounted to one to two per cent of the foundation's assets, a painful but inconsequential loss. The same participation as the core of a private fortune would have meant its destruction. It is not the investment that decides the investor's existence, but its weight.

3.7 Would more liquidity have prevented the collapse?

The question in the title can now be answered in two steps. The first step concerns the form of the collapse. The group did not fall because its assets had become worthless overnight, but because individual maturities — exemplified by the 200 million bond of November 2023 — were no longer covered and every attempt at bridging foundered on the loss of confidence. A cash reserve held at the level of the holding company and Prime, together with firmly committed credit lines in the low single-digit billions — measured against total assets of some 27 billion euros, a share of five to ten per cent — would have covered the maturities of 2023 and 2024, removed the trigger of insolvency and bought time for orderly sales at regular prices. In this precise sense the answer is: yes — with sufficient liquidity the collapse in its specific, chaotic form in the winter of 2023 would most probably not have occurred.

The second step concerns substance. Liquidity buys time; it does not replace viability. The turn in interest rates would have pulled valuations downwards even with the best cash position, the intra-group rents would have become equally questionable as a support for income values, and interest expense, which already consumed some 85 per cent of Signa Prime's revenue in 2021, would have risen further with every refinancing. Without accompanying changes — a markedly lower leverage ratio, long interest rate fixations or hedges, staggered maturities, forgoing distributions out of unrealised book profits — even a liquidity-rich group would have had to shrink, sell and impose losses on investors. The difference would lie in the course of events: adjustment through orderly sales over years instead of break-up at fire-sale prices — for creditors and co-owners a difference of many billions, as the discounts of the realisation show.

A cross-check supports both steps of the answer. Owners with similar properties but a different financial architecture — lower leverage, long interest rate fixations, spread maturities, consolidated reporting — went through the same turn in interest rates with the same write-downs but without becoming illiquid: they cut distributions, sold in an orderly fashion and waited for stabilisation. Conversely, in the same years further highly levered, short-term financed real estate groups in Germany and Scandinavia ran into difficulties — the Adler Group already mentioned as well as the Swedish landlord Samhällsbyggnadsbolaget, whose bonds were downgraded to junk status in 2023 — the rise in interest rates hit all market participants, but it threatened existence only selectively, and the selection followed the financing structure, not the quality of the properties. That is the empirical point of the case: it was not the properties that failed, but their financing. The properties themselves — the famous department stores, the Vienna luxury quarter, the prime locations — found and are finding new owners; only at prices formed without the expectation premium of the low interest rate years.[39]

The overall verdict is therefore: the absence of liquidity was the trigger and the sufficient condition of the collapse in its observed form; the deeper cause was a business model that layered illiquidity, concentration risk, valuation discretion and interest-rate-sensitive leverage one upon another and thereby bet on a single environmental condition — persistently low interest rates. Minsky (1992) describes such constructions as the regular final stage of long upswings; Kindleberger (1978) and Reinhart and Rogoff (2009) show that the conviction that this time is different belongs to every one of them. Signa was in this respect not an incomprehensible isolated case but a particularly pure one — and precisely for that reason instructive for every asset class that mixes the same ingredients. Chapter 4 turns to them.[40]

3.8 A counterfactual: three years of Goldilocks and a different course

The analysis so far has asked what more liquidity alone would have achieved. A second thought experiment comes closer to what was actually open to those acting at the beginning of 2022. Suppose that after the turn of the year 2021/22 interest rates had remained at their level for another three years — the three-month rate stood at minus 0.52 per cent in December 2021 — and that the group had used that time: unwinding the layering in the second year, reducing debt by twenty per cent and raising the liquidity held to twenty per cent of the investment volume. Figure 1 sets the actual against the assumed path of interest rates.

The assumption is less bold than it appears in hindsight. Before February 2022, Goldilocks conditions prevailed in the European capital market: a vigorous recovery after the pandemic, inflation still classified by central banks as transitory, and a money market rate that had been in negative territory since the spring of 2015 and had barely moved since 2016. A tightening of this magnitude was not priced into forward rates; nothing suggested that the three-month rate would rise by four and a half percentage points within two years. The objection to the construction is therefore not that it failed to foresee the turn in interest rates — hardly anyone did. It is that it was built in such a way that its survival depended on that turn not occurring.

What would the three measures have achieved? First it must be recorded what they would have cost. With total assets of some 27 billion euros and liabilities to banks and

[39] On the downgrade of the Swedish landlord to junk status and on its refinancing squeeze cf. the coverage of 2023 (inter alia handelsblatt.com; handelszeitung.ch); on the Adler Group the references in footnote 14.

[40] The assessment that the collapse was avoidable is shared by the publicly available risk-analytical reviews of the case, which describe the insolvency as foreseeable in view of the funding gaps visible since 2018. Sources: Thaller and Mayr (2024); Dobusch and Sturn (2024).

investors estimated at some 13 billion euros, a reduction of debt by twenty per cent means a deleveraging of some 2.6 billion euros; holding cash equal to twenty per cent of the investment volume means some 5.4 billion euros. Together that is some eight billion euros that could not have come from the ongoing business — according to the risk-analytical review, operating cash flow had not even covered debt service since 2018. It would have had to come from sales: just under a third of the portfolio, disposed of into a market that in this scenario would still have been able to absorb it. The counterfactual is therefore not one of rescue without a price, but one of orderly shrinkage.

The effect would nonetheless have been decisive. Cash of some 5.4 billion euros would have covered the bond of some 200 million euros falling due in November 2023 not narrowly but twenty-seven times over, and would have serviced the entire maturity cluster of 2023 to 2026 out of its own resources; the trigger of the cascade would have been absent. Debt lower by twenty per cent would have reduced interest expense correspondingly — at Signa Prime from some 373 to some 298 million euros, and thus from 85 to some 68 per cent of revenue. That remains an oppressive burden, and therein lies the qualification: even after deleveraging by a fifth, the group would have passed the greater part of its rental income on to its creditors.

The most effective of the three measures, however, would have been neither the cash nor the deleveraging, but the unwinding of the layering. In November 2023 the bridge financing foundered not on an absence of assets but on the impossibility of presenting robust consolidated figures within days. A group that two years earlier had turned some one thousand companies into a manageable number of audited entities with consolidated accounts would have been examinable at the decisive moment — and examinability is the condition for fresh money to be offered at all. Unwinding the layering carries the highest option value of the three measures, because it does not improve the balance sheet but keeps access to the capital market open at the very moment when it is needed.

And afterwards? The counterfactual postpones the turn in interest rates; it does not abolish it. It would have come three years later as well, and with it the same mechanics: rising capitalisation rates, falling appraised values, a loss of value of the magnitude that Section 2.2 sets out. The difference lies in the starting position. A group with some 10.4 instead of 13 billion euros of debt, cash of some 5.4 billion euros, extended maturities and audited consolidated accounts would have experienced this write-down as a balance sheet event, not as a payment event: it would have sold, shrunk and imposed losses on its owners — but at prices it helped to set. That is precisely the difference between adjustment and break-up that Section 3.7 quantified at many billions.

For the investor, this is the real lesson of the counterfactual. The three measures are expensive, and they are available only in good times: deleveraging succeeds while buyers are paying; liquidity can be built up while it is not needed; and a structure is unwound while no one is asking questions. Whoever postpones them to the day on which they become necessary finds them unaffordable — the same asymmetry that Section 2.3 described for interest rate hedging. The turn in interest rates was not foreseeable; the vulnerability to it most certainly was.

Figure 1: Three-month interest rates in the euro area, 2012 to 2025

Sources: 3-Monats-EONIA Overnight Index Swap, monthly values January 2012 to December 2026; Refinitiv Workspace, own presentation.
Notes: The counterfactual path holds the level of December 2021 (minus 0.52 per cent) for three years; the grey area marks that period. The amounts in the text are a model calculation by the author on the basis of the figures documented in Chapter 3; it assumes a proportional effect of deleveraging on interest expense and makes no statement about the feasibility of individual disposals.

4 Assets that are hard to exit in comparison

4.1 Direct real estate, open-end and closed-end property vehicles

The characteristics on which Signa foundered are no peculiarity of the case but general features of the real estate asset class. Direct real estate is concentration risk par excellence: a single property, one location, one circle of tenants, a sale that takes months and whose price falls with the seller's time pressure. Open-end real estate funds mitigate concentration risk through diversification but add the maturity transformation described in Chapter 2: they promise daily or short-term redemption on a portfolio that cannot be sold within weeks. Fecht and Wedow (2014) showed in the German market how this promise breaks: in 2005/2006 and then in large numbers from 2008, open-end real estate funds had to suspend the redemption of units; several were wound up, and investors waited years for their money. The legislator drew the consequence with minimum holding and notice periods — a tacit admission that daily liquidity on an illiquid portfolio was a design flaw.

That the reform mitigates the vulnerability but does not remove it was shown once again by the turn in interest rates: from 2024, funds flowed continuously out of German open-end retail real estate funds — according to industry association statistics some 5.9 billion euros in 2024 and a further 5.7 billion euros in the first nine months of 2025 alone —, while appraised values followed the fallen market prices only hesitantly — whoever redeemed received the smoothed value, whoever stayed bore the risk of the lagging correction. The conflict of interest between departing and remaining investors, which Fecht and Wedow (2014) describe as the core of the run risk, persists; only the periods have become longer. For the investor the simple translation follows: even the regulated, diversified, daily-priced real estate fund remains by its nature an illiquid vehicle with a liquidity promise — the asset class does not disown its construction.[41]

Closed-end participations — structured on the German and Austrian model as limited partnership interests in individual properties or small portfolios — honestly forgo the liquidity promise: the investor is committed for the term, and a secondary market exists only fragmentarily and at substantial discounts. In return, the remaining characteristics affect him undiminished: concentration risk at property level, appraisal-based valuation, high leverage ratios and an information position shaped by the sponsor. The parallels to a participation in a Signa property company are immediate; the essential difference lies in the order of magnitude, not in the construction.

German and Austrian investor history offers rich illustrative material for this asset class. A study of 1,139 closed-end funds launched since 1972 with some 37 billion euros of investor capital concluded that 69 per cent of them brought investors capital losses and that only 6 per cent met their prospectus projections; for shipping funds the loss rate was 81 and for media funds 96 per cent. The secondary market, where it existed, priced the units for years at substantial discounts to the subscription amount.[42]

4.2 Private equity: the closest relative

The closest relative to the profile of the Signa case is private equity: capital committed for eight to twelve years, levered corporate acquisitions, valuation of the portfolio companies by the manager himself, and an exit that succeeds only through a sale or a listing at a time determined by the market. Empirical research paints an ambivalent picture of the asset class. Harris, Jenkinson and Kaplan (2014) report returns above the stock market for buyout funds — some 20 to 27 per cent over the life of the fund and more than three

[41] Net outflows from German open-end retail real estate funds according to the statistics of the fund association BVI, as at 30 September 2025; the assets under management of these funds stood at some 115 billion euros at that time. Source: boersen-zeitung.de (12 November 2025).

[42] Study of 1,139 closed-end funds launched since 1972 with some 37 billion euros of investor capital; only 6 per cent met their prospectus projections. Source: Stiftung Warentest, test.de (14 September 2015).

percentage points annually —, while Kaplan and Schoar (2005) find, for their earlier sample, net returns that on average correspond roughly to the stock market, with remarkable persistence among the best managers; Phalippou and Gottschalg (2009), by contrast, show that after costs and on a sober valuation of the residual holdings a substantial part of the reported advantage disappears. Franzoni, Nowak and Phalippou (2012) demonstrate that private equity returns are systematically loaded with liquidity risk — the asset class fails to earn its premium precisely when the investor would need it most urgently.

Two results of this literature deserve particular attention in the light of the Signa case. The first concerns valuation: because managers value their participations themselves on a quarterly basis, the reported value trajectories appear smoothed and the range of fluctuation understated — the same effect that Geltner (1991) described for real estate appraisals. Ilmanen, Chandra and McQuinn (2019) state openly that part of the asset class's popularity rests on this optical calm; Stafford (2022) shows that the return profile of many buyout funds can be replicated with levered, cheaply valued listed equities — including the fluctuations that the fund's reporting conceals. The second result concerns the exit: whoever has to sell before the end of the term achieves on the secondary market an average discount of 13.8 per cent to the last reported value, and far more in crisis phases (Nadauld, Sensoy, Vorkink and Weisbach, 2019). The discount is the price tag of illiquidity — visible only at the moment of need.[43]

One difference deserves acknowledgement, however, because it falls in favour of the fund solution: the ordering of rights. A regular participation fund binds its manager to a partnership agreement with investment limits, reporting obligations, key person clauses and investor advisory boards; the valuation follows recognised guidelines and is audited; and the term forces settlement on the realised result. The Signa group knew no such commitments in this form: the providers of capital subscribed for participations in a structure whose rules the owner set and could change. The lesson is not that fund agreements protect against losses — it is that the investor should know and price the difference between contractually ordered and person-borne governance before he subscribes.

How strongly valuation inertia steers the behaviour of providers of capital was shown by the year 2022 in an almost laboratory-like arrangement. While listed equities and bonds fell by double digits, private equity portfolios reported only small write-downs — not because their participations had been spared, but because their valuation follows the stock market with a lag of quarters. In the portfolios of institutional investors the calculated share of private market assets thereby rose above target allocations, which slowed new commitments and loaded the secondary market with selling pressure; the discounts widened accordingly: for units held by institutional investors, the price achieved on the secondary

[43] The buyers of such secondary market units correspondingly achieve above-average returns — an indication supporting the rule of counter-cyclical acquisition at a discount developed in Chapter 5.

market fell from 92 per cent of reported value in 2021 to 81 per cent in 2022, and over-allocation was the decisive motive in just under half of the sales. This process demonstrates the twofold distortion that results from the use of smoothed values: they calm the reporting in a crisis and at the same time block the exits — the very calm that spares the report makes realisation at the reported market value impossible.[44]

The Signa case adds a vivid chapter to this literature, for it united the construction of a private equity vehicle with that of a real estate portfolio holder: long-term committed assets increased by debt, financed in part with short-term funds, held in a structure that deprived the provider of capital of any overall view. The investor experience is similar too: like the subscribers to a weak fund vintage, the Signa investors learned the true value of their participation only once the timing of the exit was no longer freely theirs to choose. Ang, Papanikolaou and Westerfield (2014) have shown formally what follows from this for wealth planning: whoever cannot act when he wishes must choose the position smaller from the outset and hold more safe liquidity alongside it than the reported fluctuations would suggest.

4.3 Further forms: private credit, infrastructure, profit participation rights

The same basic pattern recurs in further asset forms that grew during the low interest rate years. Private credit funds extend loans that no market values on a continuing basis; their defaults show up late, their reported calm disguises the credit risk, and their redemption terms are in the small print. Infrastructure investments tie up capital for decades against income dependent on regulation. Unlisted profit participation rights and subordinated loans — repeatedly the subject of investor scandals in Austria and Germany — combine fixed promises of interest with the lowest rank in insolvency: the nine per cent profit participation certificates from the environment of the Signa proceedings illustrate the asset class exemplarily. Even collectibles — art, wine, classic cars — obey the rule: in a boom they appear to rise steadily because trading is rare and selective; when the need arises, the auction day determines the price.

The test of private credit funds, meanwhile, is still to come. The asset class essentially emerged after the financial crisis and, until the turn in interest rates, did almost nothing but grow; its default history stems from benign years. Rising interest rates act here in two ways — they increase the income from the mostly floating-rate loans and at the same time the burden on the borrowers, whose interest coverage falls. Which effect predominates will be decided only in a genuine recession. The investor who has internalised the Signa lessons recognises the familiar ingredients: valuation by the manager, illiquidity of the investment,

[44] Price level for units held by institutional investors on the private equity secondary market: 92 per cent of reported value in 2021, 81 per cent in 2022; over-allocation as the motive for sale in 48 per cent of sales. Source: Jefferies, Global Secondary Market Review, January 2023.

leverage in the borrower — and draws the conclusion not against the asset class but in favour of careful dosing.

4.4 Common patterns and the illiquidity premium

Across all the forms discussed, the same traits recur, and they permit a sober overall assessment of the asset class. The illiquidity premium exists: whoever forgoes tradability is compensated for it over long-run averages, as the price theory of liquidity leads one to expect (Amihud and Mendelson, 1986; an overview of the asset class is given by Ang, 2014, Chapter 13). But it is neither fixed nor guaranteed. Franzoni, Nowak and Phalippou (2012) put the liquidity risk component of private equity returns at some three percentage points annually — after deducting it, the much-cited return advantage of the asset class shrinks to zero. The premium is therefore predominantly compensation for risk borne, not a gift; and it accrues to the investor only if he sees the risk through, rather than returning it on the secondary market at an unfavourable moment.

Added to this is a structure of interests that the investor should see soberly. Managers of illiquid vehicles value, within wide limits, the very assets to which their own fees and performance shares relate; sponsors shape the information position on the basis of which subscriptions are made; and the incentives of all involved — intermediaries, valuers, financiers — point in the same direction during a boom. This is not an accusation but a description of structure, and it accords with the Signa case as much as with the history of funds: the valuation of illiquid assets is ultimately controlled only by the exit. That is why the exit — its duration, its conditions, its price — belongs at the centre of every examination, not at its margin.

Placed within this spectrum, the Signa case proves to be not an alien body but an extreme point: it combined the exit duration of direct real estate, the self-valuation of a participation fund, the opacity of a person-borne structure and a use of debt that was unusually high even for this asset class — and it did so on a scale that no longer forgave mistakes. This is not to criticise the asset class as a whole; rather, the specific combination of its features proves problematic at a maximum allocation. The practical value of the overview lies in interrogating every concrete offering as to how many of the critical features it combines and in what strength — the answer yields no list of prohibitions, but a guide to blending.

Table 6 arranges the asset forms discussed according to the four features that the Signa case has shown to be critical: exit duration, valuation basis, investor insight and customary leverage. The listed share serves as the benchmark — not because it is low-risk, but because its risk is continuously visible and its exit possible at any time. The overview shows: none of the forms is to be avoided, but each demands the same triad of limited position size, long horizon and deliberately held liquidity that Chapter 5 sets out.

Table 6: Assets that are hard to exit in comparison

Asset form	Customary exit	Valuation basis	Insight and leverage
Direct real estate	Months to years	Appraisal	high for the owner; leverage customary
Open-end real estate fund	Notice periods, suspended in crises	Appraisal	limited; moderate leverage
Closed-end participation	End of term; secondary market at a discount	Sponsor's appraisal	low; leverage high
Private equity (fund)	8 to 12 years; secondary market at a discount	Valuation by the manager	limited; leverage high
Private credit fund	Notice periods, gates possible	Manager's model	low; leverage variable
Profit participation rights, subordinated loans	End of term	no continuous valuation	low; lowest rank
Listed share (benchmark)	at any time	Market price	high; leverage optional

Sources: Own presentation on the basis of the literature cited in Sections 4.1 to 4.3.

5 Lessons for investing

From the Signa case and the comparative analysis, rules can be derived for dealing with illiquid, hard-to-value and opaque investments. They are deliberately kept plain — their force lies not in sophistication but in the discipline of their application — and they are to be understood as general, abstract principles of risk management and investment appraisal, not as individual recommendations in the sense of investment advice.

5.1 Partial commitments only

The first rule concerns position size. Illiquid assets belong in a portfolio — as a part, never as the whole. The formal justification is provided by Ang, Papanikolaou and Westerfield (2014): because the investor cannot rebalance between trading opportunities, the illiquid position must be smaller than expected return and reported volatility would suggest; the smoothed value trajectories additionally understate the true risk (Geltner, 1991). The practical justification is provided by Signa: even experienced large investors lost amounts there that remained bearable only because they — like the industrial foundation mentioned, with one to two per cent of its assets — had entered into partial commitments. Whoever, by contrast, concentrates his wealth on a single illiquid idea with leverage is, in the unfavourable case, not poor in return but insolvent. Markowitz (1952) remains here too the first and last word: diversification is the only free advantage in investing.

How large may the partial commitment be? There is no figure valid for everyone, but there is an order of magnitude. Institutions with a perpetual horizon and secure inflows — foundations, pension schemes — can, following the model of the large university endowments, carry high illiquidity ratios as well, provided that spending reserves and manager selection are right (Swensen, 2009). A private fortune that has to carry living expenses, provision for old age and the unforeseen is better placed with a share of illiquid assets whose total loss would not touch the plan of life — depending on circumstances, rather in the region of five to ten per cent, and within that share diversified across vintages, managers and asset classes. The industrial foundation mentioned demonstrated vividly, with its one to two per cent in the Signa case, how a limited misallocation works out: publicly perceptible, yet immaterial to the overall result.

5.2 A long investment horizon and one's own liquidity reserve

The second rule concerns time. Illiquid assets reward whoever does not have to sell and punish whoever must — the secondary market discount of 13.8 per cent on average (Nadauld, Sensoy, Vorkink and Weisbach, 2019) is the bill for the premature exit. Two things follow from this. First: commit only capital whose availability over the full term — eight, ten, twelve years — is dispensable, including the possibility that redemptions are suspended and terms extended. Second: alongside the illiquid positions, hold a liquidity reserve of one's own that covers living expenses, obligations and capital call commitments for years. The investor needs his cash reserve for the same reason as the company: it is the price of not having to be a seller in a crisis — and it is what first makes possible what the third rule demands.[45]

Part of the reserve is also provision for obligations that arise from the investment itself. Participation funds draw down committed capital over years — frequently at an increased rate precisely when markets are weak and opportunities good; whoever intended to meet the commitment out of future sales of other assets becomes a forced seller in his own house during a crisis. Closed-end participations involve obligations to make further contributions; real estate involves maintenance and special repayments under loan covenants. The reserve is therefore to be sized not according to the normal case but according to the simultaneous occurrence of the inconvenient ones — the same yardstick by which Chapter 2 assessed the crisis resilience of the company. What applied there to the group applies here in miniature: commitments are the debts of the future.

5.3 Buying during periods of weakness at a discount

The third rule concerns the timing of entry and demands the most patience. Illiquid assets are sold in an upswing at premiums and with flattering value trajectories; their true price shows itself in weakness, when committed sellers meet few buyers. Whoever seriously wants the asset class therefore buys at that point: on the secondary market at a discount, in an

[45] Swensen (2009) showed for institutional portfolios that high illiquidity ratios are sustainable only with secured spending reserves and the utmost care in manager selection.

industry crisis, out of wind-downs and situations of distress. The evidence points in the same direction: the buyers of the secondary market units in the study by Nadauld and co-authors earned above-average returns; both Kaplan and Schoar (2005) and Harris, Jenkinson and Kaplan (2014) find a negative relationship between aggregate capital inflows into the asset class and the return of the fund vintages concerned, from which — as this author's own inference — the advantage of counter-cyclically raised vintages follows; and whoever acquired a landmark department store out of an insolvency estate in 2024 paid prices that had nothing more in common with the book values of 2021. The precondition is the reserve from rule two — and the willingness to wait for years while others buy. With this asset class, patience is not a virtue but part of the return.

Several routes are open for implementing this rule, differing in effort and accessibility. The direct route runs via secondary funds and secondary market platforms that acquire existing fund units at a discount. A more liquid detour uses the stock market itself: listed owners and holding companies regularly trade far below reported net asset value during periods of weakness — whoever wants to buy the asset class obtains it there with a visible discount, daily tradability and audited consolidation, that is, while forgoing precisely those characteristics from which the Signa case suffered. Finally, the patient buyer exploits situations of distress themselves: from wind-downs, estates and restructurings, properties become available whose price reflects the seller's haste. Common to all routes is the precondition: cash and patience — the crisis of others is an opportunity only for the one who does not share it.

5.4 Due diligence questions before committing

Preceding the due diligence questions is a sober question about the distribution channel: who earns from the subscription coming about, and how much? Illiquid investment products for retail investors traditionally carry high distribution and soft costs — with the closed-end funds of past decades, not infrequently a double-digit percentage of the subscription amount flowed into distribution and structuring before the first euro was invested. High placement commissions explain why it is precisely the most opaque products that find the most eager intermediation, and they burden the return where the investor sees it least. A heuristic rule has proved its worth: the more intensively an illiquid product is distributed, the more carefully one should examine why it requires active distribution.[46]

The fourth rule concerns selection. The Signa case supplies the due diligence questions along with it: how high is the leverage ratio, and what happens to the equity in the event of a write-down of twenty or thirty per cent? How are the debts remunerated — fixed or floating — and when do they fall due? Who values the assets, on whose instructions, and

[46] On the cost burden of opaque participation products cf., for private equity, the fee analysis by Phalippou and Gottschalg (2009); on the outcome record of German closed-end retail funds the study of 1,139 funds referred to in Section 4.1.

which assumptions carry the value — in particular: do the rental or other income streams arise in the market or within the same group? Is there a consolidated set of accounts, and can the structure be drawn on a single page? Are distributions fed out of cash flows or out of book profits? And finally: how large is the vehicle's own cash reserve, measured against its maturities? The same due diligence questions apply mutatis mutandis to banks and co-investors: whoever enters layered groups as a lender or co-investor should, beyond the property-level view, take into account total indebtedness, intra-group interconnections and — in the case of foundation and foreign structures — the beneficial owners and their other commitments; the reviews of the case show that it was precisely this overall view that was regularly absent. If several of these questions remain without a clear answer, that in itself is a weighty result of the examination: with this asset class, limited transparency is not a side issue but itself a material risk factor.[47][48]

6 Conclusions: a twofold verdict

6.1 What should have been done differently at Signa

To the question of what the group should have done better, the analysis gives a short answer in main points — first and foremost the first. Above all: more liquidity. A cash reserve together with firmly committed credit lines of five to ten per cent of total assets at the level of the holding company and Prime would have removed the trigger of the collapse — the uncovered maturities of the winter of 2023 — and would have made the difference between orderly adjustment and break-up. In addition: a noticeably lower leverage ratio that leaves equity remaining even after a severe revaluation; long interest rate fixations or hedges against a rise in interest rates instead of dependence on permanently cheap money; staggered maturities without clustering; forgoing distributions out of unrealised revaluation gains; market-based rather than intra-group valuation bases; and a structure with consolidated accounts that would have allowed providers of capital and management itself an overall view. None of these points owes itself to hindsight alone — each corresponds to the state of knowledge as Chapter 2 developed it from the literature, and according to the risk-analytical review the funding gaps had been discernible since 2018.

It is remarkable that these points condition one another: liquidity without lower leverage would merely have postponed the collapse; lower leverage without interest rate fixation would nevertheless have drained earning power; and the best financial structure would have remained built on sand without defensive valuation. The group failed not on account of a single error but on account of the simultaneity of several that reinforced one

[47] On the scrutiny of layered structures from a lender's and an investigative perspective cf. Reinhart (2025) as well as Thaller and Mayr (2024).
[48] The questions coincide with the warning signs that the risk-analytical review of the case identifies in retrospect as having been recognisable early (Thaller and Mayr, 2024).

another — and on account of a structure that prevented that simultaneity from being recognised. The most concise version of the verdict on Signa is therefore: liquidity would have prevented the crash; only the sum of liquidity, lower use of debt and transparency would have made it viable.

6.2 Conclusion for the investor

For the investor, the paper condenses into a few sentences. Assets that are hard to exit, hard to value and offer limited insight — real estate, private equity, private credit, closed-end participations, profit participation rights — carry a premium that has to be earned: through limited position sizes that leave even the total loss of a single position bearable; through an investment horizon that spans the full term including extensions; through a liquidity reserve of one's own that saves the investor from becoming a seller at the worst possible moment; and through the patience to seek entry during periods of weakness at a discount instead of buying flattered value trajectories at premiums in a boom. Whoever asks the due diligence questions from Section 5.4 and insists on clear answers sorts out the most dangerous offerings by himself.

The final lesson of the case is at the same time the most general, and it applies to the entrepreneur and the investor alike: liquidity is not a residual item of wealth planning but its foundation. In good years it visibly costs return, and in bad years it invisibly pays for survival — as the ability to service obligations, seize opportunities and gain time when everyone else is losing it. The Signa Group held assets of twenty-seven billion euros and failed over two hundred million of debt falling due. No more pointed closing word on the value of liquidity can be formulated.

A final glance goes to the other side of the market, for every situation of distress has its buyers. The acquirers of the Signa assets — retail groups, sovereign wealth funds, family companies, a city — all applied the rules that this paper has developed: they held liquidity when others had none; they bought at a discount during a period of weakness; they chose properties they knew; and they could wait. The transfer of assets from levered to liquid hands that took place in the Signa realisations is not a misfortune of the market but its order — and the quiet answer to the question of what the liquidity reserve had been good for in all those years when it appeared only to cost return.

The limits of this paper follow from its sources: it rests on publicly available information about ongoing proceedings; final recovery rates, judicial findings on valuation practice and the complete internal view of the financing structure are still outstanding and may yet shift individual assessments. Future research will be able to examine the case again with the final reports of the insolvency administration; the central economic proposition — liquidity as a condition of survival for levered, illiquid asset structures — is unlikely to change much as a result.

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All assessments reflect the state of information as at the editorial deadline in August 2026 and may change with new findings — for instance the final reports of the insolvency administration.

The author gratefully receives notice of any inaccuracies and will take them into account in future versions.