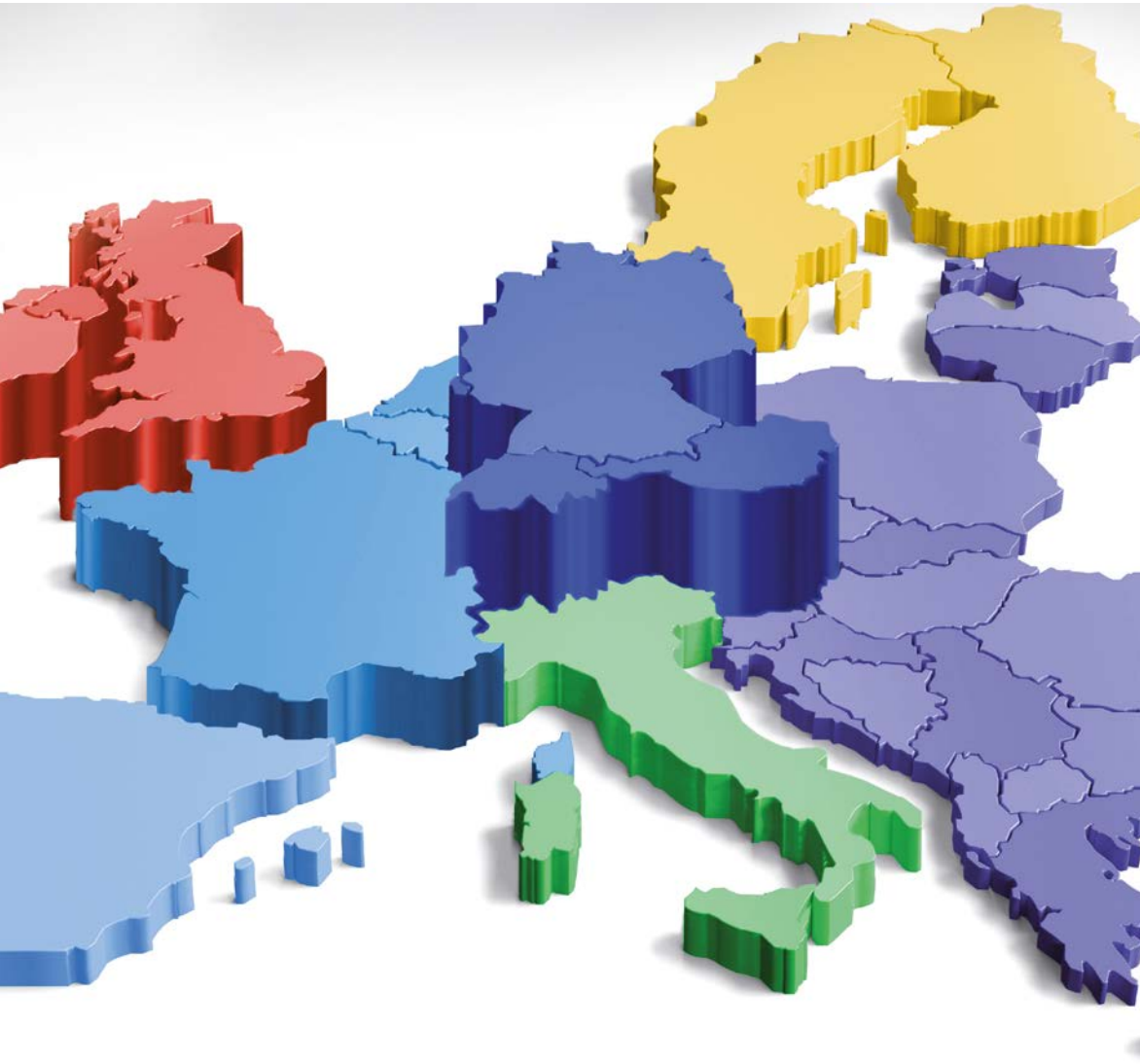
Institute of Insurance Economics

University of St.Gallen

Run-off 2016:
The status quo and future relevance of run-off in the German-speaking non-life insurance market

Martin Eling / Philipp Schaper



I·VW HSG Schriftenreihe, Band 59

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Management Summary Marktbefragung (Deutsch)

Teilnehmerkreis

- Die Teilnehmer der Studie verfügen nach eigenen Angaben über 254,1 Milliarden Euro an versicherungstechnischen Rückstellungen und decken 53,0 % des deutschsprachigen Markts ab.
- Gegenüber ersten Studien von KPMG (2007, 2010) fällt auf, dass sich nicht nur global agierende Rückversicherer und Spezialversicherer, sondern auch national agierende Erstversicherer bis hin zu kleineren Versicherern für die Thematik interessieren. Dies spiegelt sich in einer hohen Streuung der teilnehmenden Gesellschaften wider.

Bestände im Run-off

- Das Thema Run-off hat sich im deutschsprachigen Raum in den vergangenen Jahren signifikant entwickelt und hat an Relevanz gewonnen. 52,9 % der Teilnehmer (71,4 % der Rückversicherer) verfügen über «inaktives Geschäft» im Sinne von nicht mehr gezeichnetem Geschäft (Run-off). Im Jahr 2012 waren dies noch 41,7 % der teilnehmenden Gesellschaften (60,9 % der Rückversicherer).
- Unternehmen, die über Run-off-Bestände verfügen, schätzen den Anteil der Rückstellungen für noch nicht abgewickelte Versicherungsfälle im Run-off auf 42,6 % (56,3 % bei Rückversichern). Die Sparten allgemeine Haftpflicht und Kraftfahrzeugversicherung verfügen über das grösste Volumen an Run-off, die Sparten Rechtsschutz und Kreditversicherung nehmen den geringsten Anteil ein. Der Hauptanteil der Run-off-Bestände wurde zwischen 1993 und 2008 gezeichnet.
- Drei Hauptgründe zur Einstellung von Zeichnungsaktivitäten sind die Aufgabe eines Geschäftsfelds, ein ausserplanmässiger Schadenverlauf sowie die Konzentration auf das Kerngeschäft (Komplexitätsreduktion).

Aktiver Umgang mit Run-off

- 30,2 % aller Teilnehmer (50,0 % der Rückversicherer) geben an, nicht mehr gezeichnetes Geschäft in ihrem Unternehmen aktiv zu reduzieren. 2012 waren dies noch 26,3 % aller Teilnehmer (45,5 % der Rückversicherer); folglich gewinnt das aktive Run-off-Management an Bedeutung.
- Commutation und Bestandsübertragung sind die Methoden, mit denen die Befragten bisher am meisten Erfahrungen haben.
- Neben der Freisetzung von Kapital und der Reduktion administrativer Kosten wird als Hauptgrund für die aktive Abwicklung von Run-off die Unsicherheit in der künftigen Schadenentwicklung genannt.

Implikationen von Solvency II / SST und Ausblick

- Risiken bezüglich Run-off (insbesondere die Neubewertung und die höhere Eigenmittelunterlegung) werden in der Risikostrategie nach Solvency II / SST im Vergleich zu 2012 zunehmend berücksichtigt. Deutsche Versicherer holen den Schweizer Vorsprung im Management von Run-off auf.
- Generell erwarten die Teilnehmer eine grössere Zunahme der Run-off-Aktivitäten, insbesondere zum Ziel der aktiven Risikoreduktion.

Management Summary Market Survey (English)

Participants

- By their own account, the participants in the study have 254.1 billion euros in technical provisions and represent 53.0% of the German-speaking market.
- Compared to the first studies carried out by KPMG (2007, 2010), it is worthy of note that not only global reinsurers and specialist insurers were interested in the matter, but also national direct insurers and even smaller insurers. This is reflected by the great diversity amongst the participating companies.

Run-off portfolios

- In recent years, run-off has visibly evolved in German-speaking countries and has grown in significance. 52.9% of the participants (71.4% of the reinsurers) had 'inactive business', i.e. business that they were no longer underwriting (run-off). In 2012 only 41.7% of the participating companies (60.9% of the reinsurers) had inactive business.
- Companies with run-off portfolios estimate that 42.6% of their provisions for losses that have not yet been settled are in run-off (56.3% for reinsurers). General liability and vehicle insurance have the largest volume of run-off, whereas legal protection and credit insurance have the lowest volume. The majority of the run-off portfolios were underwritten between 1993 and 2008.
- The three main reasons for the discontinuation of underwriting are the discontinuation of a field of business, unexpected losses and concentration on core business (complexity reduction).

Active run-off management

- 30.2% of the participants (50.0% of the reinsurers) stated that they were actively reducing business that they were no longer underwriting. In 2012, 26.3% of the participants (45.5% of the reinsurers) were doing so; this shows that active run-off management is becoming more significant.
- Commutation and portfolio transfer are the methods with which the participants currently have the most experience.
- Besides the release of capital and the reduction of administrative costs, the main reason to actively reduce run-off is the uncertainty of future losses.

Implications of Solvency II / SST and Outlook

- Compared to 2012, the risk strategy in line with Solvency II / SST pays greater attention to risks relating to run-off (especially remeasurement and the higher capital backing). German insurers are catching up on Swiss insurers in the management of run-off.
- In general, the participants expect the scale of run-off activities to increase, especially for the purposes of actively reducing risk.

List of abbreviations

ADC	Adverse Development Cover
AG	Stock Company
APH	Asbestos, Pollution and Health
BaFin	German Federal Financial Supervisory Authority
BdV	Bund der Versicherten e. V.
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHF	Swiss Franc
EEA	European Economic Area
EY	Ernst & Young
FINMA	Swiss Financial Market Supervisory Authority
FMA	Austrian Financial Market Authority
GAAP	Generally Accepted Accounting Principles
IBNER	Incurred But Not Enough Reserved
IBNR	Incurred But Not Reported
IHK	German Chambers of Commerce and Industry
KapAusstV	German Capital Resources Regulation
IIL	The Insurance Institute of London
ILS	Insurance Linked Securities
IRLA	Insurance & Reinsurance Legacy Association
IT	Information Technology
KFZ	Motor Vehicle
LPT	Loss Portfolio Transfer
M&A	Mergers & Acquisitions
NAV	Net Asset Value
örVU	Public Insurance Comnpanies
QIS 5	Quantitative Impact Study 5
RBNS	Reported But Not Settled
SCR	Solvency Capital Requirements
SST	Swiss Solvency Test
SII	Solvency II
TS	Technical Specifications
VAG	Insurance Supervision Law
VVaG	Mutual Insurance Company
WACC	Weighted Average Cost of Capital

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1 Introduction

In the German-speaking countries, a lot has happened in terms of run-off since the first run-off study carried out by the Institute of Insurance Economics of the University of St.Gallen (see Eling and Pankoke [2013]). According to estimates, the volume of technical provisions in run-off increased once more over the previous three years. Active run-off management – namely, the implementation of internal and external measures designed to reduce run-off portfolios – is also becoming more and more relevant. For example, there have been numerous run-off externalisations recently. It is also apparent that run-off is affecting not only reinsurers and international insurance companies, but increasingly the entire insurance landscape. Furthermore, run-off is becoming more and more prevalent in life insurance.

Run-off and active run-off management are becoming more relevant for insurers.

The issue is affecting various insurance companies.

These developments are possibly due to the trends which are increasing the pressure on profitability and operational excellence within the industry. For example, current interest rates are moving insurance companies to focus more on underwriting results. For unprofitable and cost-intensive sectors, run-off provides a suitable opportunity to gradually withdraw from the field of business. At the same time, the need for management tools to help handle run-off portfolios is increasing, as is the range of external run-off services. Additionally, risk-based regulatory systems such as the Swiss Solvency Test and Solvency II are making risks relating to run-off more transparent and allowing companies to move their focus back to active capital management.

Operational excellence and pressure to be profitable are affecting the industry.

Risks relating to run-off are becoming more transparent, especially due to risk-based regulatory systems.

Overall, an understanding of run-off is growing in the industry and withdrawals from a field of business are no longer exclusively seen as negative. The supervisory authorities are working more and more with run-off and publishing the potential benefits of active run-off management for customers.

This study comprises a theoretical section and empirical analyses.

Despite the obvious relevance of the issue, run-off has so far not received enough attention in the literature. This is the motivation behind this study, which pursues two key goals. For one, we are collecting existing knowledge on the core aspects of run-off and compiling the theoretical principles of the issue. Additionally, we are picking up from previous studies – especially Eling and Pankoke (2013), KPMG (2010) and KPMG (2007) – and carrying out an empirical analysis of run-off. This study is intended to produce an up-to-date overview of the significance of run-off as a management instrument on the market and deliver findings on its future importance in the German-speaking countries. We therefore invited all licensed loss insurers and reinsurers in Germany, Switzerland, Austria and Luxembourg to take part in a market survey; 75 companies participated. In another empirical analysis, we ask 18 experts in the industry about the implications for the German-speaking run-off market and derive further information about its future development.

The empirical analysis facilitates chronological comparisons with Eling and Pankoke (2013), KPMG (2010) and KPMG (2007).

75 insurance companies and 18 experts took part in the surveys.

The study is structured as follows. In section 2, we discuss the principles of run-off. Initially, we define key terms and provide an overview of the key characteristics of run-off. We then introduce the main instruments of active run-off management and discuss the reasons to send business in run-off and carry out active run-off management. We also discuss externalisation in detail and present current trends and market developments. Section 3 presents the methods and results of the empirical survey. In particular, we focus on the current motivation to discontinue underwriting activities, the active management options that are in use and the effects of Solvency II / SST on run-off. In section 4, we use the basics of run-off and the empirical results to derive key implications for the German-speaking run-off market and refer to the opinions of industrial experts. In section 5, we conclude with a summary.

2 Principles

2.1 Definitions and backgrounds

Run-off is not defined by regulatory law in the German-speaking countries.

The national insurance regulations of the German-speaking countries do not define run-off. In Switzerland, Article 5 of the Swiss Insurance Supervision Act (VAG) merely addresses the specifics of terminating operations. In Germany, insurance companies that discontinue operations voluntarily or under regulatory law normally go into liquidation. In this state, no new insurance policies may be taken out and no existing policies may be renewed; the insurance portfolio may only be wound up (BaFin, 2014). The characteristics of run-off are similar to those of liquidation, although run-off and liquidation are generally to be viewed as two different phenomena. The key difference between run-off and liquidation is that the discontinuation of underwriting activities as part of run-off can be the result of a strategic corporate decision, whereas liquidation is mostly due to financial distress experienced by the insurer (BaFin, 2014).

Run-off should be viewed separately from liquidation.

Section 165 of the German Insurance Supervision Act (VAG) discusses the winding up of reinsurance companies.

Following the amendment of the German Insurance Supervision Act (VAG) on 21 December 2015, the matter of winding up reinsurance companies is now addressed (see Section 165 of the VAG). The regulations affect reinsurers that do not conclude any new insurance policies and wind up their existing portfolios with the sole purpose of discontinuing business activities. These features also concern companies in run-off.

We define run-off as business for which there are still technical provisions but which is no longer actively being underwritten and is therefore not generating any more premiums.[1] Run-off

[1] German literature generally distinguishes between 'discontinued business' (portfolios in run-off) and active run-off (active management of discontinued business, e.g. a transfer to a third party). Run-off concerns portfolios which were sent in run-off and which are being wound up internally as well as the active management of run-off (e.g., by means of a transfer to a third

Run-off is no longer underwritten business which no longer generates premiums but for which technical provisions and liabilities still exist.

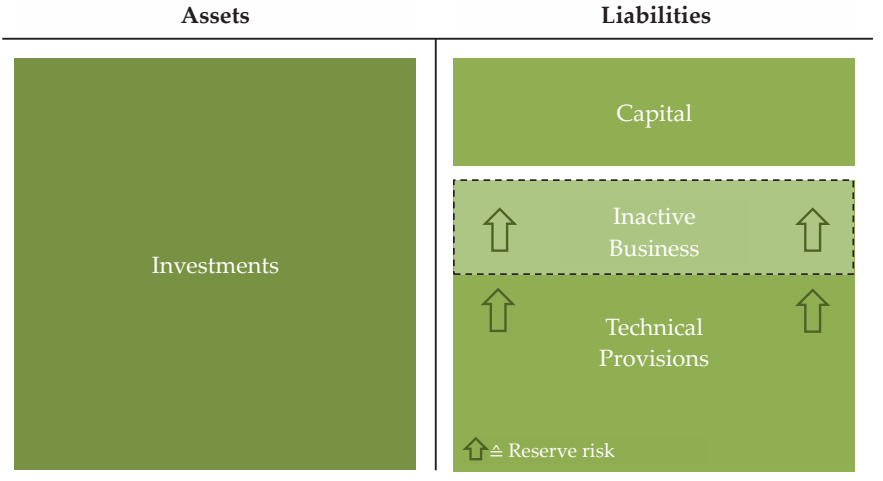
Run-off can concern a subsidiary, a department, a product segment or a business unit that can be distinguished by its characteristics.

Run-off reserves are recognised in the balance sheet until the portfolio is fully wound up.

can concern a subsidiary, a department, a product segment or a business unit that can be distinguished by its characteristics. Therefore, run-off can occur in an otherwise active company, although an entire company can also find itself in run-off. In most cases, the decision to discontinue underwriting activities has been made in the past. Other terms for run-off include 'inactive business', 'discontinued business' and 'legacy business'.

Considered in terms of the balance sheet, run-off concerns the technical provisions relating to the discontinued business. Run-off is recognised in the balance sheet until the portfolio is fully wound up. Figure 1 represents the balance sheet of an insurer with a run-off portfolio.

Figure 1: Balance sheet of an insurer with a run-off portfolio



Source: Own representation

party). We will use this definition, although we will make it clear when we are referring to run-off portfolios or run-off management.

Creation and relevance of run-off

When an insurance company starts to underwrite business, premiums will be collected as soon as the risk is transferred (advance premiums). However, losses from the transferred risks normally occur at a different time to the transfer of risk and receipt of the premium. For the insurer, the regulation process starts as soon as the loss has occurred and been reported. If a field of business is discontinued for financial or strategic reasons, the insurer initially does not record any further inflow of premiums. The known losses for which RBNS provisions (reported but not settled) have already been formed must, however, still be settled. Additionally, late losses that have already occurred but not yet been reported might still be incurred. Insurers account for late losses in the IBNR provision (incurred but not reported).

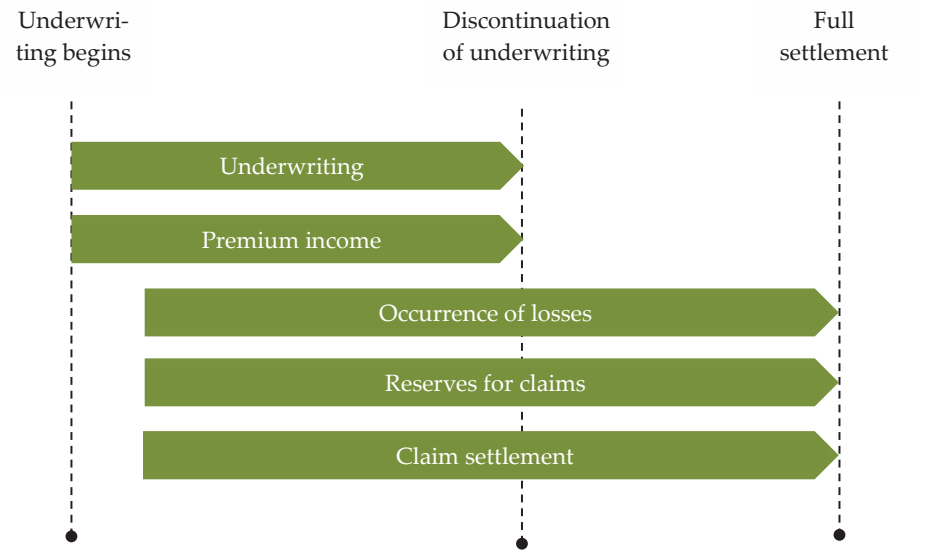
Payments of premiums and losses take place at different times.

Complete winding up means that no further payments are to be expected from the insurance portfolio.

The IBNR provisions are inherently more uncertain than the RBNS provisions and are therefore the primary source of risk for run-off portfolios. Part of dealing with run-off portfolios is continuously adjusting the provisions for losses based on new information. Depending on the line of business, several years might pass between the discontinuation of underwriting activities, the filing of the claim and the settlement of the loss. The key run-off factors and their time scales are described in Figure 2.

Several years or decades might pass between the introduction of run-off and the complete winding up of the portfolio.

Figure 2: Material and chronological aspects of run-off



Source: Own representation

The reserve risk is particularly relevant to run-off portfolios.

The reserve risk in particular is of significance to run-off portfolios (see Figure 1) and has three sources of risk. The assumptions on which the best estimate is based could prove inaccurate, the loss payments could fluctuate around the best estimate (the risk of random fluctuations) and there might be deviations with regard to the loss payment date or run-off period and / or the disbursement pattern (the timing risk). Therefore, the operating income of insurance companies could suffer negative repercussions years after the introduction of run-off if an unfavourable loss occurs.

Run-off can affect operating income years after it was introduced.

Run-off increases the liquidity risk faced by the insurer.

By ceasing underwriting, the insurance company also loses a key source of liquidity. Payment obligations (especially losses) must, however, still be discharged. This divergence of the cash flows can cause the liquidity risk faced by the insurance company to increase. Another potential effect of run-off is that the company becomes less diversified due to the reduction of its portfolio and net underwriting results therefore become

Run-off can reduce diversification within the portfolio or company.

more volatile (see BaFin, 2014). Additionally, under Solvency II the reserve risk of run-off portfolios must be backed by capital.

Under Solvency II the reserve risk of run-off portfolios is considered.

In addition to the technical risks, a company with a run-off portfolio faces challenges which require particular attention from the management (see IIL, 2006). Examples of such challenges include the reaction of key shareholders such as customers, employees and sellers. Customers might lose faith in the company if the decision to send business in run-off is made public. For example, companies with run-off may experience an increased frequency of policy surrenders (see e.g., Kutschera, 2015). In addition, employees might believe that their potential for promotion at the company is in jeopardy and leave; at the same time, it will be harder to recruit new employees if the reputation of the company is damaged by the run-off (Kutschera, 2015). This poses a considerable risk in terms of human capital as key positions within the company will be harder to fill. With regard to marketing, run-off can sometimes mean gaps in the selection of available products. This could result in greater sales fluctuation, especially if the discontinued fields of business concern products which generally involve high levels of commission (e.g., health and life insurance). The fluctuation might also impede new business for fields of business that are still active – however, effects should only be noticeable if significant parts of the underwriting activities are discontinued (e.g., an entire line of business).

The management must carefully monitor the introduction of the run-off, especially how it is received by shareholders and how they react.

If significant parts of the underwriting activities are discontinued, this can also impede new business in active fields.

Only once all losses have been settled and no more late losses are to be expected can run-off be removed from the balance sheet. At this point there are no more technical provisions for the inactive business.

Dealing with run-off portfolios

Companies pursue either an active or a passive strategy for run-off management.

Run-off portfolios can be managed actively or passively. If an insurance company pursues a passive strategy, no specific efforts can be made to reduce the run-off portfolio. The company will remain exposed to the technical risks of the run-off until all policies from the run-off portfolio have been settled. In contrast, active management systematically reduces the run-off portfolio.

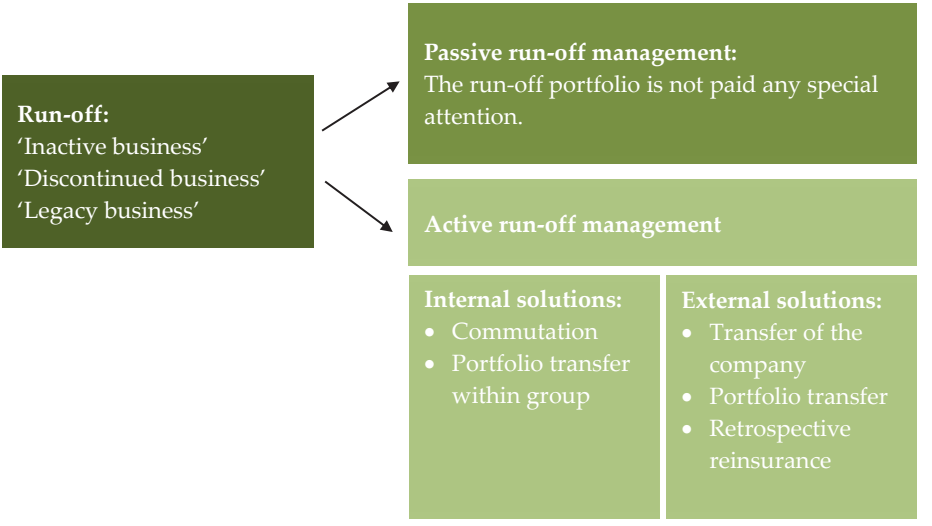
Internal and external instruments are available for actively reducing run-off.

The list of active reduction measures comprises internal and external solutions. With internal measures (i.e., commutation, portfolio transfers within the Group), no third party is involved in the active reduction. As a result, any losses incurred from the run-off portfolio are borne solely by the insurance company which underwrote the business. The company remains exposed to the risks associated with run-off; however, through commutation these risks decrease over time until the commutation is complete.

A third party is involved in the external run-off solutions.

If a third party is involved in the active reduction, the solutions are considered external (i.e., transfer of the company, portfolio transfer, retrospective reinsurance). In this context, the risks of run-off are normally transferred to an external company. With retrospective reinsurance, the provisions are still recognised in the balance sheet of the ceding company, just as with the internal solutions. Figure 3 summarises the definition of run-off and ways to deal with it.

Figure 3: Definition of run-off and run-off management



Source: Own representation

The following section describes the instruments used to actively reduce run-off in more detail.

2.2 Active run-off management

2.2.1 Overview of instruments

Four instruments can be used to actively manage run-off.

There are four[2] key instruments for active run-off management: Company transfer, portfolio transfer, retrospective reinsurance and commutation, including the special scheme of arrangement. The instruments are described in more detail below.

Company transfer (share deal)

When a company is transferred, its entire insurance portfolio transfers to new shareholders.

Once a company has discontinued all underwriting activities, its entire run-off insurance portfolio can be transferred to new shareholders through the sale of the company. The transfer encompasses all technical provisions, which means that the previous owners will no longer be exposed to risk – not even the risk of late losses. Obviously, a company can only be sold if it is a public limited company (Aktiengesellschaft). With a mutual insurance company or a public insurance company, it is less easy to determine how ownership rights can be acquired. A company transfer must be approved by the supervisory authority.[3]

Insurance portfolio transfer

Run-off portfolios can be transferred to an internal or external company.

In a portfolio transfer, policies in run-off are compiled into a portfolio and transferred to another company. The transfer can be to a company within or outside of the insurance group. Therefore, a portfolio transfer can be either an internal or external measure. The receiving insurer takes over the technical provisions (including provisions for late losses) and the covering assets (normally financial assets). A portfolio transfer must also

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[2] Debt collection can be mentioned at this juncture, although it is not an instrument used to manage run-off. This is a way of managing receivables through third parties – namely, by selling outstanding reinsurance claims to a third party. The terms of and parties to the reinsurance policy do not change. The buyer only acquires the cash flows.

[3] For example, the provisions of Sections 17 and 18 of the German Insurance Supervision Act (VAG) apply in Germany and Article 21 of the Swiss Insurance Supervision Act (VAG) applies in Switzerland.

be approved by the supervisory authority.[4] In the German-speaking countries, however, a portfolio transfer does not require the approval of the policyholder. The same applies to a company transfer.

Retrospective reinsurance

Retrospective reinsurance provides protection against losses that have already occurred.

A retrospective reinsurance policy can be taken out for run-off portfolios. This policy provides reinsurance cover for losses which have already occurred but which are still subject to uncertainty (e.g., as to the actual loss). There are two variants to choose from: the loss portfolio transfer (LPT) and adverse development cover (ADC). The LPT works like a traditional quota share. The reinsurer covers a predefined percentage of each loss resulting from a portfolio; a percentage of up to 100 can be agreed for run-off portfolios. An LPT can be used to hedge against uncertainties in terms of the timing risk and the risk that the actual loss will exceed expectations (the underwriting risk).

The loss portfolio transfer (LPT) and adverse development cover (ADC) are classic types of retrospective reinsurance.

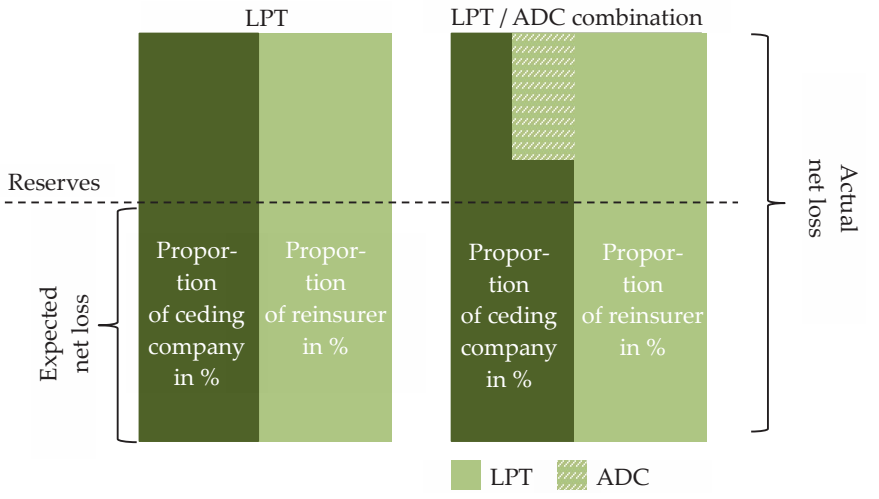
The LPT can be used to hedge against the timing and underwriting risk.

Adverse development cover is similar to stop loss cover. ADC covers the risk that the actual total loss within a portfolio exceeds the expected loss. However, ADC does not split up the losses proportionally in the same way as an LPT; the ceding insurer bears the loss up to an agreed maximum amount (priority) and the reinsurer bears the portion exceeding the priority (excess loss), up to an agreed amount. Additionally, ADC can neutralise risks that have not yet been taken into consideration in the technical provisions. An LPT with a quota of 100% and the combination of LPT (with a high quota) and ADC are equivalent to a portfolio transfer in economic terms. Figure 4 compares the way the LPT and ADC work.

The LPT works like a traditional quota share and ADC like stop loss.

[4] In Germany, for example, the provisions of Section 13, Sections 63 and 73 (special regulations based on the company's country of incorporation) and Section 166 (regulations for reinsurers) of the German Insurance Supervision Act (VAG) apply. In Switzerland, the provisions of Article 62 of the Swiss Insurance Supervision Act (VAG) apply.

Figure 4: How the LPT and ADC work



Source: Own representation based on EY / IRLA (2015)

With retrospective reinsurance, the risk of default on the part of the reinsurer should be taken into consideration and hedged.

With the retrospective reinsurance solution, however, the ceding insurer retains its legal obligations towards the policyholders. Therefore, the risk of default on the part of the reinsurer should be taken into consideration and a hedge should be created against such a default (e.g., with a letter of credit). Additionally, the risk of default on the part of the reinsurer must be backed by capital under Solvency II. Also, with the retrospective reinsurance solution the insurance company must still bear the costs of loss settlement. Retrospective reinsurance can be carried out more quickly than a portfolio or company transfer. Furthermore, this instrument remains undetectable to policyholders and does not require the approval of a supervisory authority.

The risk of default on the part of the reinsurer must be backed by capital under Solvency II.

Commutation

Commutation is where the insurance company and the policyholder agree to lift the insurance cover.

Commutation is where the insurance company and the policyholder agree to retroactively lift the insurance cover in exchange for a settlement. This can reduce run-off portfolios on the contractual level before the final winding up. Generally, this

only happens in contractual relationships between direct insurers and reinsurers or two reinsurers. However, in contractual relationships between policyholders and direct insurers, commutation is also an option in specific cases, such as large-scale industrial contracts. Commutation does not require the approval of a supervisory authority.

Scheme of arrangement

Schemes of arrangements are a special type of commutation and are widespread, especially in the UK and in the reinsurance sector.

A scheme of arrangement is a special type of commutation which is used in the reinsurance sector and in the UK in particular. As soon as a certain percentage of reinsurance policyholders agree to the offer of the reinsurer to lift the insurance cover in exchange for the payment of a settlement, the cover will be lifted. However, the legal enforcement of this measure – and especially the view of the supervisory authorities – is questionable in German-speaking countries. For example, 'solvent schemes of arrangement' in the field of direct insurance are not recognised in Germany (see Federal Court of Justice of Germany, judgement of 15 February 2012 – IV ZR 194/09).

Structured solutions

If necessary, instruments can also be combined. For example, retrospective reinsurance can provide immediate relief before a company is ultimately sold.

2.2.2 Comparison of instruments

Besides the aforementioned differences (e.g., approval requirement), the methods can be distinguished by the following aspects in particular:[5]

- Economic finality
- Legal finality
- Risk and capital reduction
- Reputational risk

Economic finality

If the run-off no longer poses any technical risks, the business is considered economically final.

Economic finality means that the company which underwrote the policies that are in run-off gets rid of the technical risk. All external instruments for actively reducing run-off are to be considered economically final. With the transfer of a portfolio or company, all of the technical reserves are transferred to another risk carrier, so an unfavourable loss will no longer affect the (net income of the) ceding company. Retrospective reinsurance can also fully hedge against an unfavourable loss. With commutation, economic finality comes gradually.

Legal finality

If legal claims arising from the insurance policy can no longer be filed, the business counts as legally final.

Legal finality means that no legal claims arising from the insurance policy can be filed against the company which underwrote the policies that are in run-off. This can be achieved through a portfolio or company transfer. Once the transaction is closed and the approval of the supervisory authority has been granted, policyholders can only file claims against the receiving company. With commutation, both parties agree to waive their claims arising from the (re)insurance policy in order that the company which underwrote the policies that are now in run-off is no longer subject to any legal obligations. Only retrospective reinsurance cannot be considered legally final amongst the

[5] Due to their similar characters, commutation and schemes of arrangement are considered as one instrument below.

external run-off instruments. For example, if the reinsurer is insolvent, the direct insurer will still be obliged to satisfy the claims of the policyholders which arise from the insurance policy. The risk of default on the part of the reinsurer should therefore be taken into consideration in this context. The risk of default on the part of a contractual partner is of no significance with any of the other external instruments.

Amongst the external run-off instruments only retrospective reinsurance cannot be considered legally final.

Risk and capital reduction

Risk and capital reduction (in the sense of reducing regulatory capital requirements) takes place at different times depending on which instrument is used. With retrospective reinsurance, the ceding company experiences a reduction in risk and consequently a reduction in the required capital immediately after the conclusion of the policy. With external policy and company transfers, the relief only occurs after approval is granted by the supervisory authority. In Germany, it can take up to 90 days for a supervisory authority to inspect a portfolio or company transfer. Additionally, the intensive due diligence process for portfolio and company transfers has to be initiated in advance.

Risks and capital requirements can be reduced through active run-off management.

Internal portfolio transfers do not release capital and commutation merely provides gradual relief. Additionally, the capital reduction for reinsurance solutions should be lower compared to the other external instruments. This is because the ceding company must take the credit risk of the reinsurer into account when calculating solvency under Solvency II. The credit risk reflects the probability of default as estimated by rating agencies.

Reputational risk

The reputational risk should be taken into account with external portfolio and company transfers as the transfer of the policies to the new company is visible to the policyholder. However, the reputational risk can be ignored with retrospective reinsurance as it is not an identifiable run-off measure. The same applies to internal portfolio transfers (in-house winding up).

The reputational risk should be taken into account when selecting a management instrument.

However, the reputational risk can be relevant to internal commutation. Even if both parties agree to rescind the policy, the premature termination of the insurance cover can be considered a breach of trust.

Table 1 broadly compares all active run-off management instruments based on the criteria listed.

Table 1: Comparison of active run-off management instruments

	In-house management	Commutation	Portfolio transfer	Company transfer	Retrospective reinsurance
Economic finality	No	Yes (gradual)	Yes	Yes	Yes
Legal finality	No	Yes (gradual)	Yes	Yes	No
Risk and capital reduction	None	Gradual	Following approval	Following approval	Immediate
Reputational risk	No	Maybe	Yes	Yes	No

Source: Own representation

2.3 Reasons

2.3.1 To send business in run-off

Generally, the decision to send business in run-off is the result of a strategic managerial decision[6] for which there are numerous reasons. These essentially concern aspects of internal performance management and the internal planning process (IIL, 2006). Below we discuss the aspects of the profitability situation, losses and strategic reorientation. The decision to send business in run-off is most often based not exclusively on one factor, but rather on a combination of many.

The decision to send business in run-off is most often based on economic perspectives.

Profitability

From the perspective of the owner, capital should be allocated to the most profitable business units within a company or Group. Run-off becomes a potential management instrument when a business unit fails to generate the necessary capital returns or if there are better opportunities to use the capital (IIL, 2006). Profitability is predominantly influenced by the amount of capital that has to be kept available and the cost situation. In light of Solvency II, it is likely that more and more companies will actively manage their capital as the necessary capital backing for individual branches of business is becoming more transparent. Besides capital, the active underwriting of insurance business requires various other resources (e.g., employees and IT). If the costs of these resources are not proportionate with the achievable yield, run-off becomes a potential instrument for withdrawing from the business over the long term (see Kaspar, 2014a). One important aspect in this context is the size of the business unit. If the business unit is so small that no perceptible economies of scale can be produced through fixed costs, the cost ratio can be too high for the business to remain profitable (Kutschera, 2015). For example, according to media reports, the British RSA Group plc considered introducing run-off for its

Under Solvency II, it is likely that more and more companies will examine whether their capital is being put to the best possible use.

[6] The decision is often not brought about by external factors such as insolvency.

German branch in 2014 as the branch had not reached a suitable size and had become unprofitable (Kaspar, 2014b).[7] Run-off can also be used to cut marketing costs, whereby agencies can be closed and sales representatives dismissed through the discontinuation of new business (see Kutschera, 2015). The aspects of costs and profitability are likely to increase in significance due primarily to the low interest rates, as the focus of the management will increasingly be focused on actuarial practices and unprofitable business units.

Low interest rates are shifting companies' focus to their cost situations.

Losses

In light of the historical or expected losses, certain business can be unattractive to continue. If, for example, it is impossible to enforce higher prices on the market in spite of increased losses, insurers might be tempted to send business in run-off. For example, in 2015 the Arch Capital Group Ltd. ceased underwriting new risks in the field of military aviation insurance for these very reasons (Hagen, 2015). Additionally, an insufficiently large portfolio can generate insufficient diversification effects, resulting in the loss ratio being relatively high compared to the competition, for example. Finally, uncertainty surrounding the run-off period of losses is another important aspect. Run-off traditionally occurs in the field of liability insurance or with APH (asbestos, pollution and health) risks as these are characterised by an unusually long run-off period.

Uncertainty surrounding the run-off period is a key aspect of run-off, especially in long-tail lines of business.

Strategic reorientation

The decision to send business in run-off can result from a strategic reorientation. If, for example, a new business unit or branch fails to achieve the necessary growth or any other strategic objective, run-off provides a way to withdraw from that field of business. The withdrawal can affect a specific region, a product range or an entire line of business. Furthermore, restructuring measures brought about by

[7] The branch was sent in run-off over the course of the year for the German branch (Ascher, 2014).

mergers and acquisitions can result in run-off.[8] Sometimes the buyer might have no interest in continuing with certain business units or there are already enterprises in that field which will not be expanded (ILL, 2006). At the same time, a change of legal structure following a merger can trigger the run-off. For example, after taking over Victoria-Versicherung, the ERGO Insurance Group decided not to underwrite its products (Pohl, 2010).

Uncertainty surrounding the run-off period is a key aspect of run-off, especially in long-tail lines of business.

[8] The reassessment of the employee structure, IT systems and underwriting expertise of a merged unit can lead to the introduction of run-off for certain segments (see Vincent, 2015).

2.3.2 For active run-off management

Below we set out reasons for active run-off management from the perspective of the ceding insurance company. Additionally, we illustrate the motives of companies that provide active management instruments.

From the perspective of the ceding insurer

The choice between internal and external instruments depends on various aspects and their relevance to the insurer.

For ceding insurance companies, there are five main reasons to externalise run-off: reduce complexity, reduce risk, improve solvency, free up resources and cut costs. In contrast, the reputational risk, the prospects of improving net income, taxes and the option to ring-fence are reasons which speak for an internal solution. Table 2 summarises key reasons to use internal and external solutions and instruments.

Table 2: Reasons for active run-off management from the perspective of the ceding company

	Company transfer	Portfolio transfer	Retrospective reinsurance	Commutation
Reputational risk		I	E	I
Complexity reduction	E	I E		
Income improvement		I		
Tax effects		I		
Ring fencing		I		
Risk reduction	E	E	E	I
Solvency improvement	E	E	E	I
Resource improvement	E	E		
Cost reduction	E	E		

I Internal E External

Source: Own representation

Reputational risk

If an insurance company wishes to actively manage its run-off portfolio whilst minimising the risk to its reputation, it can opt for an internal portfolio transfer, retrospective reinsurance and commutation.[9] The other methods of externalising run-off could be interpreted by other market players as a sign of a financial distress. For example, in the words of the German Federal Financial Supervisory Authority (BaFin), run-off would be viewed by the German public not so much as a strategic decision as a failure on the part of the insurers (BaFin, 2014). Additionally, policyholders could see externalisation as a breach of trust, as companies are transferring the long-term promise to cover risks to another company without their consent.

Internal portfolio transfers and commutation minimise the reputational risk.

The public still believes that the externalisation of run-off is a negative thing.

However, as described above, the decision to send business in run-off and externalise run-off does not necessarily have to be due to financial distress. Rather, it is a management instrument with a variety of reasons behind it. Externalisation can also provide advantages for the policyholder. If, for example, the company receiving a run-off portfolio generates larger pooling effects, the likelihood of default decreases for the policyholder, too (see BaFin 2014). Run-off is therefore an important instrument which should also be used in the interests of the customer.

The externalisation of run-off can provide advantages for policyholders.

Complexity reduction

The level of complexity in a company can be reduced by means of a portfolio or company transfer. The latter will most likely be

[9] The following information on the reputational risk generally also applies to the decision to send business in run-off (i.e., the discontinuation of underwriting activities brings about the risks) even without externalisation. For example, Bund der Versicherten e.V. accused Ergo of neglecting the interests of its customers, causing the premiums of Victoria Leben to be lower (see BdV, 2013). However, we must assume that externalisation causes the weight of these risks to increase, as the run-off is visible to policyholders and the portfolio is being transferred to a third party.

The external transfer of run-off and internal pooling of business serve to reduce complexity.

external, as the ceding company can be rid of its run-off portfolio and will no longer have to manage it. However, pooling run-off business within the Group can simplify winding up and thereby reduce complexity. For example, a special department or company could be set up in which to pool run-off expertise. One example of this is Allianz Re, which in 2015 pooled local run-off portfolios into one central portfolio in order to make winding up more efficient (in terms of size, experience and bargaining power) (Fläming, 2015).

Income improvement

Run-off reserves can result in profit, provided that surplus provisions are taken into consideration.

If a company does not wish to miss out on the opportunity to realise run-off profits from the run-off portfolio and thereby improve its net profit, the only option is an internal portfolio transfer.[10] In Germany, for example, the recognition and measurement of technical provisions is subject to the principle of prudence, whereby surplus provisions can be formed. Once a claim has been completely settled, the surplus reserves can be released as profits.

Tax effects

Internal portfolio transfers can shift run-off profits and losses.

Internal portfolio transfers are also used to generate tax effects. A portfolio transfer can, for example, be structured in such a way that run-off profits or losses are attributable to business units that provide a tax advantage.

Ring fencing

Ring fencing can be used to transfer certain business (e.g., asbestos risks) to a legally isolated company within the Group (Quane et al., 2001). This can be used to relieve other Group companies if externalisation is too costly an option.

[10] Naturally, passive run-off management also provides the opportunity to realise run-off profits. However, if the company wishes to actively manage its portfolio, an internal portfolio transfer is the only option.

Risk reduction

One reason to actively manage run-off is to minimise the risks associated with run-off. The key risk of run-off is the eventuality that the obligations arising from the portfolio are greater than expected in the future. This concerns both the date and scale of the losses. Run-off also increases the liquidity risk. All external solutions and commutation can serve to reduce risk.

The risk of losses from the run-off portfolio can be reduced through active management.

Solvency improvement

Following the decline in risk, the capitalisation requirements can also decrease. A capital reduction can be achieved with all external instruments and with commutation. It is likely that the relevance of this factor will grow significantly, especially in light of the shift from Solvency I to Solvency II (see Gossmann, 2014; Endres and von Mikulicz-Radecki, 2012).

Run-off has an effect on the capital requirements of a company under Solvency II.

Under Solvency I, run-off portfolios are mostly irrelevant to the calculation of capital requirements. Under Solvency I, the solvency margin is calculated based on the higher of the premium or loss indices (see Section 1 of the German Capital Resources Regulation [KapAusstV]). The premium index is measured based on the gross premiums from the previous financial year. The loss index is based on the average expenses for claims in the previous three financial years (or the previous seven under certain circumstances). When an insurer discontinues a field of business and therefore no longer receives any premiums for it, there will be one year before the cut-off, i.e. the run-off portfolio will still contribute to the premium index in the year following the discontinuation of new business. In all other years, however, the contribution to the index is zero.

Under Solvency I, run-off is almost completely irrelevant.

After one year, run-off will no longer contribute to the Solvency I premium index.

Similar conclusions can be drawn for the loss index; it can even be negative if the release of loss provisions yields a profit. The majority of expenses for claims are recorded when the reserve is formed (mostly provisions for losses and late losses). The

The contribution of run-off to the loss index under Solvency I can be negative.

winding up of the run-off portfolio can take several years depending on the line of business; additional expenses should only be incurred in connection with adjusting the reserves. Even though the impact of the run-off portfolio on both indices and therefore directly on capital requirements is negligible, the company remains exposed to risks for years after the business was sent in run-off.

Solvency I reflects the risks that are not associated with run-off.

However, the capital requirements of Solvency I do not cease to apply in their entirety; rather, they decrease in line with the provisions for losses (see Section 1 KapAusstV, Article VI). Overall, we can conclude that, unlike Solvency II, run-off under Solvency I has almost no influence on the calculation of the capital requirements.

Solvency II factors in risks associated with run-off.

Solvency II takes a risk-based approach to determining capital requirements. In this context, it is expected that the risks associated with run-off can be identified better (e.g., see BaFin, 2014). In life insurance, for example, the risk of cancellation increases in a run-off portfolio and also has to be taken into consideration for the capital requirements. In loss and accident insurance, the solvency requirements are based primarily on the reserve risk, which as described is the key risk for run-off portfolios.

The reserve risk of run-off has a key impact on the capital requirements of Solvency II.

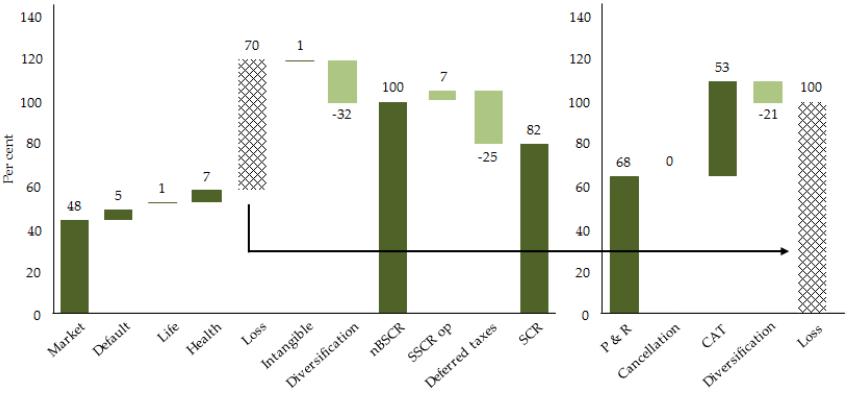
According to QIS 5, run-off will increase capital requirements under Solvency II.

The results of the fifth impact study (Quantitative Impact Study 5, QIS 5) indicate that run-off portfolios directly increase the capital requirements of loss / accident insurers.[11] For example, it shows that the non-life underwriting risk is the main driver behind the determination of solvency capital requirements. Within the actuarial practice risk module, 68% of the solvency capital is earmarked to hedge against the non-life premium and reserve risk (see BaFin 2011, as well as Figure 5).

[11] However, there is one exception for direct insurers and reinsurers who cease underwriting new business from 2016 and wind up the run-off portfolio resulting from that decision within three years. These companies are largely exempt from the regulations of Solvency II (see Article 308b of Directive 2009/138/EC).

Therefore, equity used to hedge against the non-life premium and reserve risk from the current financial year as well as from previous financial years must be backed.

Figure 5: Significance of the reserve risk under Solvency II



Source: BaFin (2011)

Below, we use a simplified case study based on Eling and Pankoke (2013) to demonstrate the impact of run-off portfolios on solvency requirements in loss and accident insurance. To do so, we consider the company Assekura with three lines of business: motor liability, motor other and general liability.

We assume that Assekura discontinues general liability. The company therefore stops underwriting new policies in this line of business, yet still holds technical provisions dating back to previous policies which now form the run-off portfolio of Assekura. For the sake of simplicity, we will only consider the solvency capital requirements resulting from the non-life premium and reserve risk and ignore the diversification effects which could occur on higher levels. Furthermore, we assume that Assekura is active in only one region and that it has no reinsurance cover. In each of its active lines of business, Assekura generates a premium volume of 1,000 monetary units. For each line of business, there are technical reserves worth 2,000 monetary units. Therefore, one third of the reserves is run-off. Table

3 shows the necessary inputs along with references to the technical specifications of QIS 5 as well as the results of the calculations.

Table 3: Case study on the significance of run-off

Lines of business	Motor liability	Motor other	General liability	Reference
Premium	1000	1000	0	
Reserves	2000	2000	2000	
QIS 5 inputs				
Premium risk	10.00%	7.00%	15%	QIS 5, TS, SCR.9.25
Reserve risk	9.50%	10.00%	11%	QIS 5, TS, SCR.9.29
Correlations	Motor liability	Motor other	General liability	
Motor liability	1	0.5	0.5	QIS 5, TS, SCR 9.34
Motor other	0.5	1	0.25	
General liability	0.5	0.25	1	
QIS 5 results				
Sigma lob	8.50%	8.09%	11%	QIS 5, TS, SCR 9.31
V lob	3000	3000	2000	QIS 5, TS, SCR.9.33
Sigma	7.04%			QIS 5, TS, SCR.9.32
Total NL pr	1565			Total SCR; QIS 5, TS, SCR.9.16
NL pr without	1200			SCR without discounted business
Absolute difference	–365			Total SCR – SCR without
Relative difference	–23.30%			Difference / total SCR

Source: Eling and Pankoke (2013)

The implications of the case study can be summarised as follows. The aggregate SCR is 1,565 monetary units for all lines of business. Without factoring in the run-off portfolio, the SCR is just 1,200 monetary units. Therefore, the SCR is around 30% higher as a result of the run-off portfolio. Equity backing under Solvency II could therefore be reduced by around 23.3% if the run-off portfolio were externalised. Naturally, these statements are subject to the limitations of our case study. Additionally, externalisation naturally requires us to factor in costs that would lower the operating income. However, the outcome underlines the relevance of run-off portfolios in the context of Solvency II. It is also noteworthy that most run-off portfolios comprise business with a long run-off period and numerous uncertainties. As shown, not only does this result in a greater need for own funds, but the capital costs of run-off portfolios are potentially significantly higher than those of active business. Moreover, reinsurance solutions under Solvency II might only provide visible relief if the reinsurer possesses a (very) good rating. In turn, however, this should also be reflected in the reinsurance price.

In the example, the capital requirements under Solvency II were reduced by 23.3% by externalising the run-off.

Run-off is growing in significance in light of Solvency II.

Freeing up resources

Externalising run-off portfolios can free up resources. The management structure (employees, marketing and product development) can be streamlined following a portfolio or company transfer. Additionally, the management can dedicate more of its resources to the core business as they are no longer required by the complex run-off business (Quane et al., 2001). Larger companies might even consider creating special positions to focus on settling the run-off portfolio, although smaller companies in particular often lack the necessary scalability.

Run-off is growing in significance in light of Solvency II.

Cost reductions

If a portfolio or company transfer is carried out, costs can also be cut. This is because certain roles required to manage the run-off portfolio are rendered unnecessary. Another example of

A portfolio or company transfer reduces administrative costs.

cost reductions is the externalisation of run-off portfolios in connection with asbestos risks in the USA. Smaller companies in particular are being affected by the high costs of management and of having their reserves appraised; these costs are negated if the portfolio is externalised (Kurz, 2014).

From the perspective of the receiving company

There are companies on the market that are interested in actively managing their own run-off portfolios and sometimes even expanding them. Some of these companies specialise in winding up run-off business. The main reasons for taking on run-off are economical. For example, when a portfolio or company is transferred, the receiving company expects to make the winding up of the policies more profitable. In Germany, technical provisions – even for inactive business – are generally evaluated under the principle of wariness. Run-off profits can result from excess reserves.

By specialising, companies can make the transfer of run-off profitable.

The specialisation of the receiving company can also produce other advantages as the company is able to manage the settlement of losses more efficiently by virtue of its expertise, for example. Furthermore, the volume of business of the receiving company could generate synergies (e.g., through better diversification). It must also be taken into account that cost-intensive sectors such as marketing, product development and sales almost entirely disappear.

2.4 Externalisation of run-off

The transaction process for portfolio and company transfers is described in more detail below. We also illustrate the pricing process. The information concerning the valuation of reserves can also be applied to the pricing of retrospective reinsurance solutions.

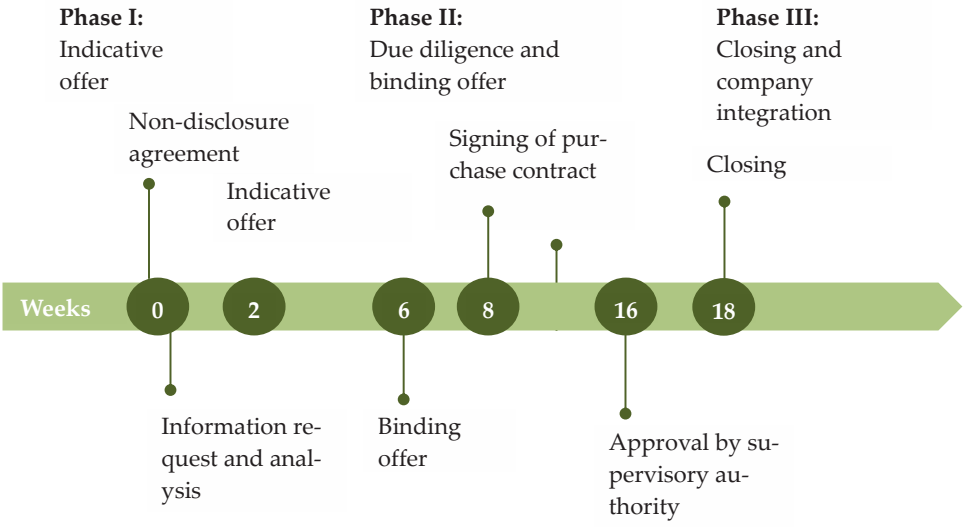
2.4.1 The transaction process

A portfolio or company transfer can be arranged as either a tender process or exclusive negotiation. The tender process is traditionally split into three phases:

I Submission of indicative offers
II Performance of due diligence and submission of binding offers
III Closing and integration into the receiving company

Generally speaking, the exclusive negotiation is similar to the two final phases of the tender process, as the key difference is that there is no open competition. Both processes are normally organised and managed by a broker. The complete tender process is set out in Figure 6.

Figure 6: Tender process



Source: Own representation

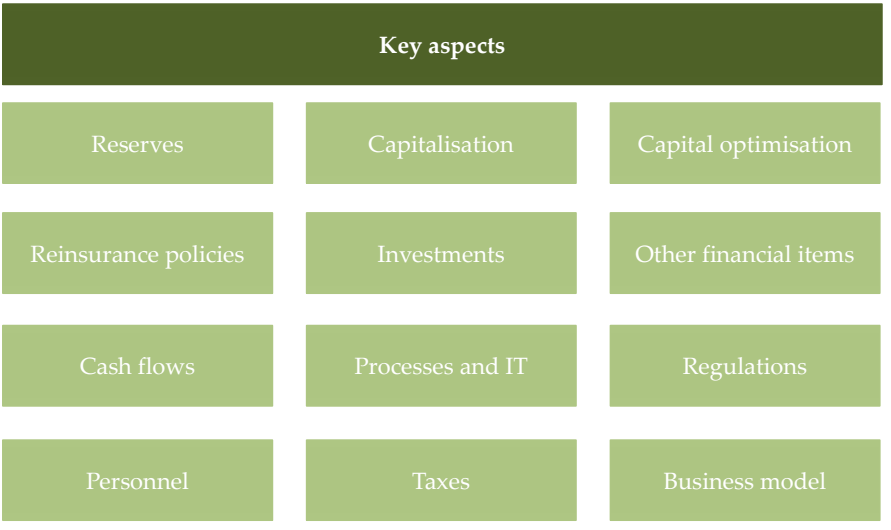
Phase I

In the first phase, the ceding company provides the bidders with information on the portfolio or company. In order to protect the interests of the ceding company, the negotiating parties conclude a non-disclosure agreement. Based on the information that was made available, the bidders submit indicative offers. As a rule, none of the bidders receives information on the offers of its competitors. The broker and the ceding company select the offers and move on to the second phase.

Phase II

In the second phase, the ceding company allows the bidders with the best offers to carry out due diligence for the run-off portfolio or the entire company. The key aspects analysed as part of the due diligence are listed in Figure 7.

Figure 7: Key aspects of due diligence



Source: Own representation based on EY / IRLA (2015)

The due diligence checks should also evaluate country-specific circumstances (e.g., liability provisions in the USA if policies were underwritten there); various experts are therefore often involved in the process. The entire process can take up to six weeks.

The bidders now submit a legally binding offer on the basis of the due diligence. A share purchase contract can be included in the offer. If the ceding company agrees to the offer, the contract is signed following the final negotiations.

Phase III

The transaction is finally closed in the third and final phase. During this phase, the criteria to which transaction contracts are often subject are met. For example, the transfer of a portfolio or company in German-speaking countries requires the approval of the supervisory authority. The supervisory authorities assess whether the interests of the policyholders will be protected after the transaction has taken place and whether the receiving company can fulfil the obligations arising from the insurance policies (e.g., see Section 13 and Sections 17 and 18 of the German Insurance Supervision Act (VAG) and Articles 21 and 62 of the Swiss Insurance Supervision Act [VAG]). However, the regulatory laws in the German-speaking countries generally do not provide for consent on the part of the policyholders.[12]

Before they approve the portfolio and company transfer, the supervisory authorities assess whether or not the interests of the policyholders will be protected.

Additionally, in the third phase the acquired portfolio or company is transferred and integrated. Integration is the 'entire organisational transformation' (Vettel, 2014). Integration also encompasses the integration of the transferred policies into the IT systems and administration of the receiving company. These tasks should be taken into consideration as part of the due diligence (operational due diligence) and pricing.

The integration of acquired portfolios is the 'entire organisational transformation'.

The costs of IT integration, in particular, can vary sharply depending on data quality and availability. However, the questions of potentially transferring employees, of the future administrative settlement of losses (internal or external) and of the related administrative costs are relevant. The outsourcing of certain roles such as portfolio management is contingent on two conditions set out by the supervisory authorities in Germany: monitoring by the management and the protection of the interests of the policyholders (see BaFin, 2014).

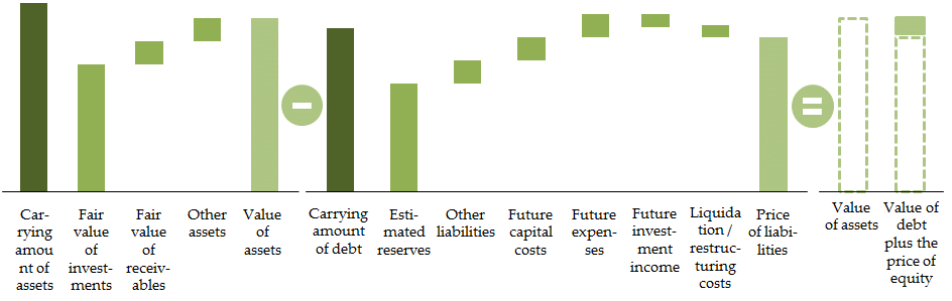
The costs of IT integration mostly depend on the quality and availability of data.

[12] In the EEA, the regulations can vary from country to country. For example, Italian law generally requires the consent of the policyholders.

2.4.2 Pricing

Pricing is based on the net asset value after various adjustments. To calculate the net asset value, items on the balance sheet (mostly measured using local GAAP) of the ceding company are remeasured in line with the market. Therefore, market values are derived for the assets and liabilities.[13] The derivation of the net asset value can be found in Figure 8.

Figure 8: Derivation of the net asset value



Source: Own representation

Assets

The assets primarily comprise liquid assets and financial assets. For loss and accident insurers, corporate and government bonds represent the highest percentage of capital investments, followed by real estate investments and shares. The exact allocation of financial assets is dependent on the aspects of asset liability management (e.g., duration and currency) as well as expected returns. Close attention should be paid to the credit quality of financial assets. Whereas the value of liquid assets can be accurately determined, the market value of the financial assets does not necessarily have to correspond to the recognised carrying amount.

[13] There are no market values for most of the technical liabilities. Therefore, the market value used is a best estimate and is increased by a risk premium.

Existing reinsurance policies can be considered assets.

If there are reinsurance policies which reduce the obligations of the insurer resulting from the run-off portfolio, these can be recognised as assets (reinsurance assets). However, in a company transfer existing reinsurance policies do not automatically transfer to the receiving company.[14] The reinsurer (if the run-off portfolio belongs to a direct insurer) or retrocessionaire (if the portfolio belongs to a reinsurance company) must agree to the retention of the reinsurance cover by means of a novation agreement.[15] Alternatively, the claims arising from reinsurance policies belonging to the ceding company could be assigned to the receiving company. Furthermore, the capital backing and therefore the solvency of the reinsurer must be assessed when these are recognised as assets.

As part of a portfolio or company transfer, the reinsurer must consent to the transfer of the insurance cover by means of novation.

Receivables – most often from brokers and agents – are the final key part of the assets. The market value of the receivables should be reported with care and should factor in the probability of default.

Equity and liabilities

On the equity and liabilities side, the main analysis concerns the sufficiency of RBNS, IBNR and IBNER.

With regard to equity and liabilities, the technical provisions in particular are evaluated for the purposes of pricing. Provisions for losses reserve the claims expectancy for losses that have been reported but not settled. Additionally, the provisions for late losses cover losses that have been incurred but not reported (IBNR). The IBNR provisions are normally formed based on historic loss patterns and they can be adjusted over time in line with new developments. One element of IBNR is the provision for losses that have occurred and are known, for which not all claims have yet been filed (incurred but not enough reserved, IBNER).[16] Figure 9 compares the IBNR and RBNS provisions.

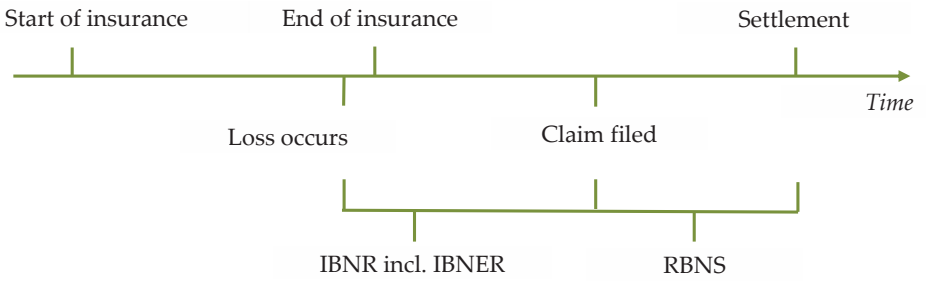
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[14] The contractual relationship exists merely between the ceding company and the reinsurer.

[15] The reinsurance policy is then re-concluded between the reinsurer and the receiving company.

[16] IBNER reserves the difference between the expected actual loss and the losses that have already been reported (see Schlemmer and Tarkowski [2013]).

Figure 9: Chronological order of IBNR and RBNS



Source: Own representation

As with the plausibility check in connection with the credit quality of assets, a company should assess whether or not the technical provisions are high enough. Therefore, we must consider the evaluation of the ceding company's guidelines on reserves down to how it investigates individual losses. In this context, the quality and availability of data must be taken into consideration. Additionally, external service providers can be engaged to evaluate country-specific particularities.

The guidelines on reserves can be taken into account when analysing the technical provisions.

Other assets, equity and liabilities include, for example, deferred tax credits and liabilities. An exemplary calculation of the net asset value can be found in Table 4.

Table 4: Sample calculation of net asset value

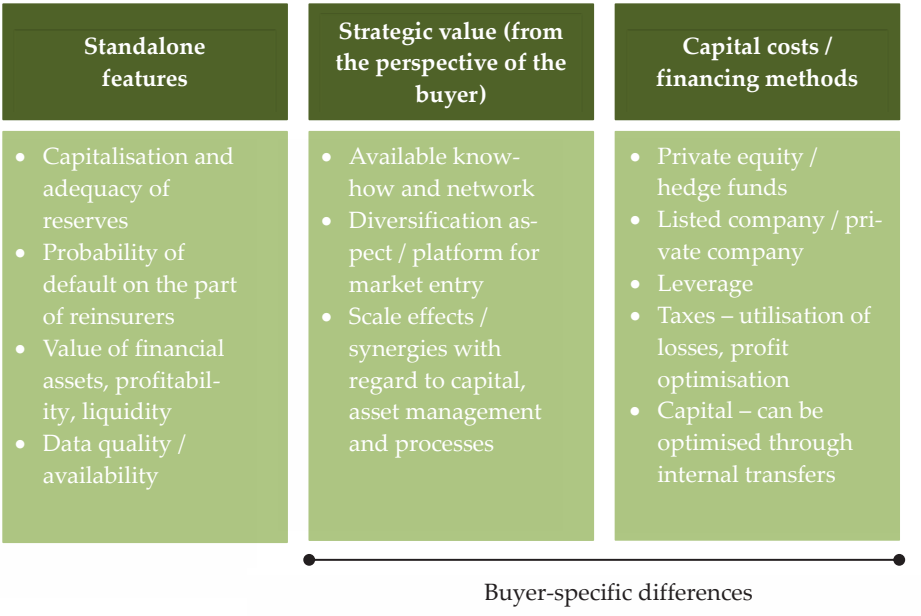
Values in thousands of Swiss francs	Q4 2015
Liquid assets	478
Available-for-sale financial assets	383,488
Reinsurance assets	4,084
Receivables	157,294
Total assets	545,344
RBNS	110,038
IBNR (incl. IBNER)	150,652
Liabilities	22,702
Other liabilities	1,338
Total equity and liabilities	284,730
Net asset value	260,614

Source: Own representation

Other factors

Besides the net asset value, other factors influence pricing. For example, the bidder can take cost deductions on the purchase price (e.g., capital and due diligence costs) into consideration. The run-off portfolio or company could, however, be of strategic value to the bidder, as a result of which the bidder would be prepared to pay a premium on the net asset value for the potential synergies. Figure 10 provides an overview of the key pricing factors.

Figure 10: Key pricing factors



Source: Own representation based on EY / IRLA (2015)

During pricing, particular attention must be paid to the capital costs. As run-off transactions predominantly concern business with many risks and uncertainties, long run-off periods and volatile losses, the recognised capital costs must be considerably higher than for conventional loss and accident insurance. Given the high equity costs, loans are another way to finance run-off transactions in order to decrease the weighted average cost of capital (WACC). In contrast to the deductions for capital costs, the ceding company can be reimbursed for its lost share of the future investment returns by means of an increase in the purchase price.

2.5 Market developments and trends

2.5.1 Market overview

Innovations in regulatory law facilitate portfolio transfers.

In recent years, the run-off market has visibly evolved and become more and more significant. The amendment of the German Insurance Supervision Act (VAG) of 2007 is an important milestone in the development of the German market. The amendment adds the regulations of Section 121 f concerning the transfer of reinsurance policy portfolios.[17] This is to be considered a supplement to Section 14 of the German Insurance Supervision Act (VAG) (transfers of direct insurance policy portfolios) and was mainly introduced in order to facilitate portfolio transfers within the EU (see BT-Drs. 16 / 1937, 2006). Below we consider three market dimensions: size, players in the market and key transactions.

Size

In Europe, the volume of run-off is estimated to be 247 billion euros and the German and Swiss markets are estimated to be worth 111 billion euros in total.

Estimates as to the volume of run-off portfolios in the European non-life insurance market can be found, for example, in past studies carried out by PwC. In 2009, the volume was estimated to be around 196 billion euros (PwC, 2009) and four years later it was estimated to be around 235 billion euros (PwC, 2013), which represents growth of approximately 20%. According to current estimates, the volume of run-off reserves in the European market is around 247 billion euros (PwC, 2015). This underlines the growth trend (in no uncertain terms) of the run-off volume and therefore also the high relevance of the issue. Within Europe, PwC (2015) estimates that the German and Swiss markets (111 billion euros combined) are the largest, followed by the UK and Ireland (52 billion euros combined) as well as France and the Benelux states (41 billion euros combined).

[17] Following the amendment of the German Insurance Supervision Act (VAG) on 21 December 2015, portfolio transfers are addressed in Sections 13 (direct insurance; special regulations in Sections 63 and 73) and 166 (reinsurance).

Players in the run-off market

Below we examine the companies that are providing external run-off solutions. Generally speaking, external run-off solutions can only be offered by licensed insurance companies (see Section 13 of the German Insurance Supervision Act [VAG]). Direct insurers and reinsurers are therefore the potential transaction partners for a portfolio transfer or company transfer. Retrospective reinsurance solutions are normally provided by reinsurers, although under German law a company licensed to provide direct insurance can also underwrite reinsurance business.

Only an insurance company can be a partner in a portfolio or company transfer.

There are now also companies on the market that specialise in winding up run-off business. Run-off specialists can operate as a receiving insurance company or service provider. In the international market, AXA Liability Managers, Enstar, Catalina and Randall & Quilter are active run-off specialists. In the German-speaking countries, DARAG is the most significant insurance company that specialises in run-off. Other players in the German-speaking market are Munich Re, Catalina Holdings (Bermuda), Pro Insurance Solutions (Tawa Plc Group), Hamburg Internationale Rück and Hochrhein Internationale Rückversicherung (a subsidiary of AXA Liability Managers). Besides traditional and specialised insurers, other market players such as private equity firms, hedge funds or insurance linked securities (ILS) investors (e.g., the now closed Credit Suisse ILS Property & Casualty Fund) could establish themselves in the market in future.[18]

Run-off specialists operate as a receiving insurance company or service provider.

[18] As described above, run-off solutions can generally only be provided by insurance companies, therefore the participation of these players in the run-off market should be limited to the provision of capital resources.

Table 5 lists some key market players. The list is not exhaustive.

Table 5: Key players in the run-off market

Company	Total assets in million euros (Dec. 2014)	Country incorportation
Berkshire Hathaway INC.	306,091	USA
Enstar Group Limited	9,110	Bermuda
Axa Liability Managers	2,600*	France
Catalina Holdings	2,384	Bermuda
Randall & Quilter	729	Great Britain
Riverstone Group	777	Great Britain
DARAG	114	Germany

Source: Own representation

Remarks: This information is based on the annual financial statements and other publications of the companies. All values were converted to euros as at 31 December 2014. The Berkshire Hathaway Group does not specialise in run-off, yet it is listed as being part of the sector due to its size and significance. *Concerns managed liabilities. **Formerly Tawa plc. No data for 2014 were found for Compre, Hochrhein Internationale Rückversicherung (a subsidiary of Axa Liability Managers) or Hamburger Internationale Rückversicherung AG (a subsidiary of Compre).

Key market events

In late 2013, DARAG acquired run-off business in Sweden, Greece and Belgium, increasing the total number of transactions for the company in 2013 to seven. In 2014, the run-off specialist Compre Holdings acquired Hamburger International Rückversicherung AG from Tawa plc (see Kaspar, 2014c); it is to continue operating as a settlement platform. This marks the entry of Compre into the German and Austrian markets. In the same year, the British RSA Group Plc discontinued its German non-life insurance business (see Kaspar, 2014d). Glacier Re, a Swiss subsidiary of Catalina, reinsured a 200 million US dollar run-off marine portfolio belonging to the Dutch / Belgian company Delta Loyd (unknown, 2014). 2015 was also a transaction-intensive year – for example, DARAG alone recorded a growth of approximately 300%. A specific transaction is, for example,

the acquisition of the GERA Pool, which specialises in aviation risks and was in run-off, by Axa Liabilities Managers in April (Faulkner, 2015). Also, in the first quarter of 2016 the run-off market was highly dynamic with a variety of larger transactions. The average volume of transactions in Europe for this period was approximately 200 million euros (Gossmann, 2016). Allianz alone transferred an estimated 1.1 billion US dollars of run-off reserves to the settlement platform Enstar (Fromme, 2016), and Hamburger Internationale Rückversicherung AG acquired the international reinsurance portfolio of a German mutual insurance company (Tauber, 2016).

2.5.2 Trends

General trends for the insurance market can also be transferred to run-off.

Key trends for the German-speaking run-off market can generally be derived from the general market conditions for insurers. Current key trends include the low interest rates and the implementation of Solvency II. Additionally, the regulatory perspective plays a significant role and it is evident that run-off is growing in significance in the field of life insurance. Table 6 provides an overview of identified trends and their implications for run-off. These trends are described in more detail below.[19]

Table 6: Key trends and implications for run-off

Trend	Explanation	Implications for run-off
Low interest rates	- Profitability and operational excellence increase in significance	- Introduction of run-off for unprofitable business units - Increased externalisation of cost-intensive run-off portfolios
Solvency II	- Need for various resources - Increased capital requirements / costs	- Introduction of run-off for capital-intensive business units - Externalisation of run-off portfolios in order to free up resources
Regulatory law	- Scepticism on the part of industry representatives - BaFin acknowledges the opportunities of run-off	- The regulatory field is an important parameter for the development of the run-off market
Life insurance	- Low interest rates make guarantee products unattractive	- Run-off is growing in significance in life insurance

Source: Own representation

[19] Besides these key drivers of run-off, we can also expect run-off to increase as a by-product of the observable trend towards consolidation in the European insurance market (see Vincent, 2015).

Low interest rates

Low interest rates are putting pressure on the profitability and efficiency (operational excellence) of insurers, as returns on investments are lower. This moves the management to focus on the costs and actuarial practices of insurers. On the market, this has resulted in increasingly frequent discontinuations of underwriting activities for unprofitable business or the increased externalisation of existing run-off portfolios. Another potential effect of the low interest rates is the influx of new, alternative investors into the run-off market. This could further stimulate the run-off market as the volume of run-off solutions available on the market should prove attractive.

Low interest rates are increasing pressure on profitability, causing operational excellence to grow in significance.

Solvency II

Following the entry into force of Solvency II in January 2016, run-off activities are expected to increase (see Section 2.3 and Labes and Steer, 2014). The new regulations mainly affect smaller companies, as these are unable or will be hard-pushed to provide the necessary resources, such as employees and IT systems, to meet the requirements of risk management. These costs are compounded by the increased equity costs, which is why more and more companies might decide to send business in run-off.

Besides higher capital requirements, Solvency II also requires increased resources.

Regulatory law

Industry representatives see the regulatory field as the greatest challenge facing the development of the run-off market (e.g., see Vettel, 2014). As described in section 2.2, a portfolio and company transfer as part of active run-off management must be approved by the supervisory authority. The reliability, business model, structures and financial strength of the receiving company are just some of the factors that are analysed (see BaFin, 2014). In an interview with the financial newspaper Börsen-Zeitung, however, the current president of BaFin revealed that the supervisory authority considers run-off a suitable way to

Regulatory law will be a key factor in the future development of the run-off market.

wind up portfolios as long as the legal requirements have been met (Hufeld, 2014).

Life insurance

Even if run-off were originally a subject which affected reinsurers and loss / accident insurers and if this study focused on loss insurance, it must be pointed out that run-off is increasingly affecting life insurance as well. For example, BaFin writes that as of 2014, seven of the roughly 90 supervised life insurance companies in Germany had decided to stop underwriting new business or only to underwrite minor business (BaFin, 2014). In the life insurance market, Heidelberger Leben, for example, is serving as a settlement platform. In early 2014, it acquired the portfolios of Skandia Germany and Austria (Schumann, 2014). In September 2015 the Swiss Baloise Group transferred life insurance portfolios worth approximately 2.6 billion Euros from its German branch (Basler Leben) of the Frankfurter Leben Group (Rieksmeier, 2015).

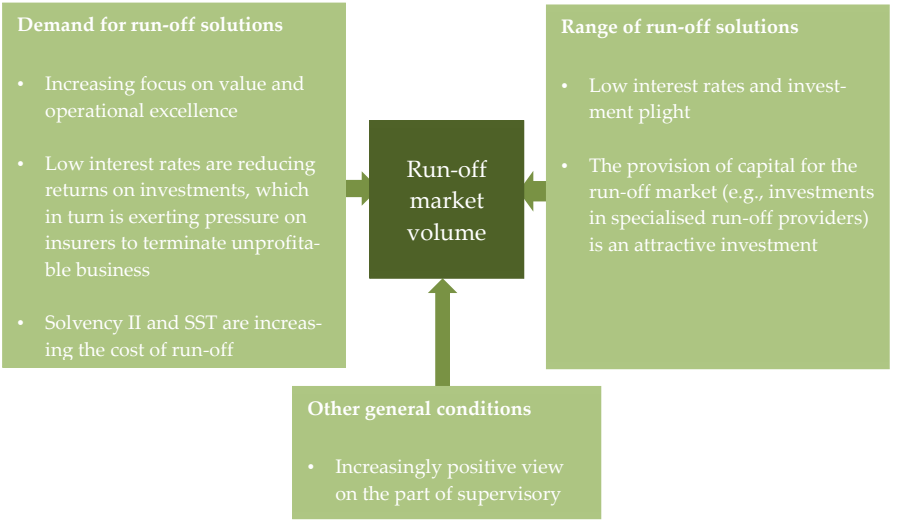
As of 2014, seven of roughly 90 supervised life insurance companies in Germany had decided to stop underwriting new business or only to underwrite minor business.

The impact of the current low interest rates in particular is moving increasing numbers of life insurers to discontinue new business involving products with guaranteed interest (see Oberhuber, 2014). In July 2015, Talanx announced that it would no longer underwrite any new life insurance policies with guaranteed interest (Fromme, 2015). Generali and Zurich Versicherung also decided to stop offering traditional policies (Kaiser, 2015).

More and more new business involving life insurance products with guaranteed interest is being discontinued.

Figure 11 categorises the aforementioned trends in terms of their implications for supply and demand as well as other general conditions for the run-off market.

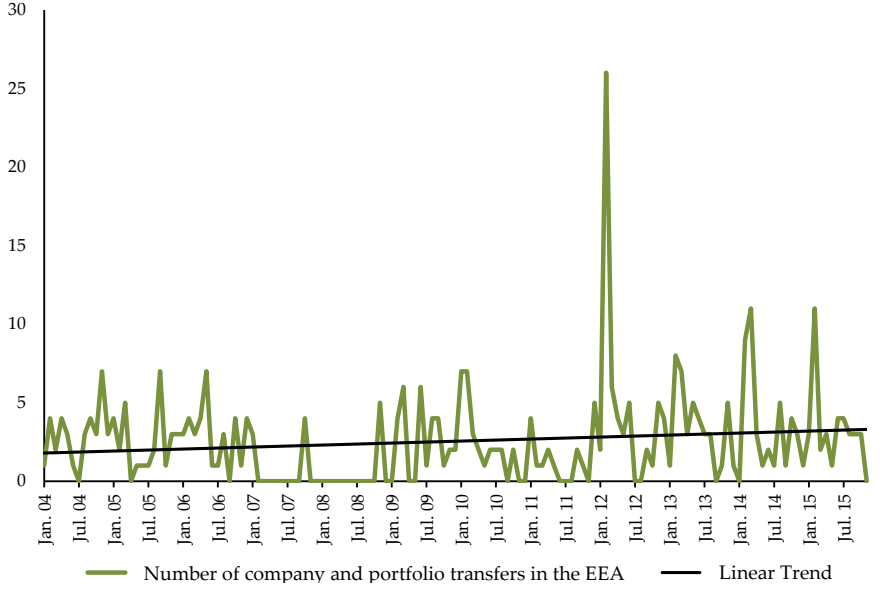
Figure 11: Categorisation of trends



Source: Own representation

In order to discover whether or not the impacts of the aforementioned trends are already observable on the run-off market, we will examine the number and characteristics of run-off transactions below. Numerous portfolio and company transfers took place in the European market in the past. Figure 12 shows the number of portfolio transfers for the European Economic Area (EEA).

Figure 12: Number of company and portfolio transfers in the EEA



Source: Own representation

Remarks: To derive the values, we counted the announcements of portfolio transfers (individual and entire portfolios) within the EEA in BaFin Journals published between 2004 and 2015. The announcements concern both life and non-life insurance.

The figure shows linear growth, which means that the number of company and portfolio transfers is increasing over time.[20]

[20] The spike in February 2012 can be explained as follows. British as well as German insurers were involved in almost every transfer in that month. In that month, the Federal Court of Justice of Germany (BGH) also issued its

However, the transfers in the BaFin Journal do not exclusively concern run-off; they also include life insurance.

Great Britain was the most active market for external run-off solutions for a long time. However, market activities in the German-speaking countries (Germany, Switzerland and Austria) have increased recently. Besides the aforementioned amendment of the German Insurance Supervision Act (VAG) and the resulting simplification of portfolio transfers, the stimulation of the run-off market might also be due to the additional external run-off solutions being made available on the German-speaking market by the aforementioned specialist companies. Figure 13 shows the percentage of all European external portfolio and company transfers by region over time.

Figure 13: Percentage of run-off portfolio and company transfers by region



Source: Own representation based on EY / IRLA (2015)

judgement on the legal recognition of British 'solvent schemes of arrangement' in Germany. The so-called equitable life judgement of the BGH rejects the applicability of the scheme in the case at hand, although it also clarifies other issues relating to the use of the schemes. It is to be assumed that this judgement had an impact on the recognition of the transfer by BaFin and that it therefore has a certain degree of influence.

3 Empirical analyis

The methods used in the market survey are described in section 3.1. The presentation of results in section 3.2 is based on the four-part structure of the market survey: Firstly, section 3.2.1 characterises the participants in the survey. Section 3.2.2 addresses key aspects of the run-off portfolios before section 3.2.2 discusses active run-off management. Section 3.2.4 considers the major implications of Solvency II or the Swiss Solvency Test for run-off. Finally, section 3.3 summarises the key outcomes of the empirical section.

3.1 Methodology

- The objective of the study is to evaluate the significance of run-off.
- The survey was sent to 650 loss insurers and reinsurers in Germany, Switzerland, Austria and Luxembourg.
- The survey was carried out from November to December 2015.

The objective of the study is to obtain an up-to-date overview of the market and information about the future significance of run-off as a management instrument in the German-speaking countries. Particular focus is placed on the implications of Solvency II and the Swiss Solvency Test for run-off. The background is that many market players expect the introduction of risk-based equity regulations to cause the relevance of run-off as a management instrument to increase. The market survey was carried out by the Institute of Insurance Economics of the University of St.Gallen in 2013 (see Eling and Pankoke, 2013) and was inspired by previous studies, especially KPMG (2007) and KPMG (2010).

The empirical analysis facilitates chronological comparisons with Eling and Pankoke (2013), KPMG (2010) and KPMG (2007).

For the market survey, a standardised questionnaire (see annex) was sent to 650 CEOs, CFOs, run-off managers and other decision-makers within licensed loss insurance and reinsurance

650 CEOs, CFOs, run-off managers and other decision-makers were invited to take part in the market survey.

The market survey covered the German, Swiss, Austrian and Luxembourgian markets.

companies in Germany, Austria, Switzerland and Luxembourg. The respondents could either return the questionnaire by post or fill it in online. The online version was also available in English. The survey was carried out from 3 November to 4 December 2015.

Due to the novelty of the subject, the questionnaire initially defined the terms 'run-off' and 'active run-off management'. The questionnaire is split into four sections (see annex). The first section (section A) contains general questions about the company. The second section (section B) concerns the existence of run-off, its key characteristics and the reasons behind the discontinuation of underwriting activities. The third section (section C) analyses the management of run-off, the respondent's experience with active run-off reduction methods and the reasons behind active run-off management and the externalisation of run-off. The final section (section D) addresses risk factors relating to run-off as well as the implications of Solvency II and the Swiss Solvency Test. Many of these aspects were already examined in Eling and Pankoke (2013) as well as in previous studies, which is why the results can be compared over time.[21]

The questionnaire asks for facts about the companies as well as the personal opinions of the participants.

Besides information on measurable circumstances, the questionnaire also asks for the opinions of the participants on certain issues relating to run-off. Ratings are provided on the basis of a scale from 0 (no significance / experience; unimportant; not accounted for) to 4 (major significance; lots of experience; very important; highly accounted for). Anonymity was guaranteed for all information provided in the questionnaire. However, the participants were all able to obtain the results of the study by providing their contact information (even in the online version). However, this information was stored separately from

[21] The study carried out by Eling and Pankoke (2013) is based on a survey carried out in 2012. Therefore, chapter 3 uses the year 2012 as a basis wherever results are compared. Likewise, the year 2015 is used as a basis for this study.

the rest of the data. Financial information could be provided either in euros or Swiss francs (CHF). However, this study is consistently based on euros; the CHF / EUR exchange rate as at 31 December 2015 (0.92) was used in the conversions.

3.2 Results

3.2.1 Participants

- 75 insurers from Germany, Switzerland, Austria and Luxembourg took part in the study.
- Direct insurers and Swiss companies are exceptionally highly represented.
- 70% of the participants are public limited companies (Aktiengesellschaften).
- The average technical provisions of the participants are 3.4 billion euros.

Table 7 provides an overview of the companies contacted for this study and those participating in it, and makes a comparison with Eling and Pankoke (2013) as well as the studies KPMG (2010) and KPMG (2007). The high turnout of 75 participants (2012: 85; 2010: N / A; 2007: 28) also underlines the great relevance of run-off in the German-speaking countries. Measured based on the technical provisions indicated in the survey compared to the total technical provisions of the four countries analysed, the participating companies represent approximately 53.0% of the German-speaking market.[22]

The participating companies represent approximately 53% of the German-speaking market.

[22] The technical provisions in the German-speaking countries total 483.2 billion euros. This number was calculated on the basis of statistics published by BaFin (2016a, 2016b), the Austrian Financial Market Authority (FMA, 2016), the Swiss Financial Market Supervisory Authority (FINMA, 2016) and the Commissariat aux Assurances (2016). By their own account, the participants in the study have 254.1 billion euros in technical provisions and cover approximately 53.0% of the market.

Table 7: Companies contacted for and participating in the four studies

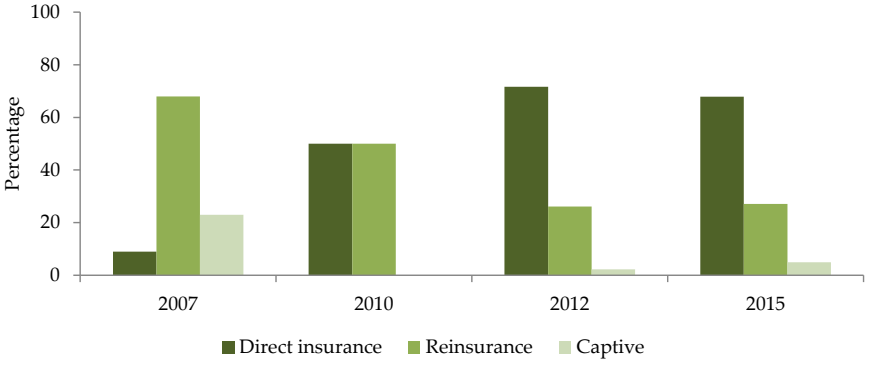
	KPMG (2007)	KPMG (2010)	Eling and Pankoke (2013)	Study at hand
Sent to	110	153	527	650
Participating companies	28	n / A	85	75
Total technical provisions*	351.0	389.0	426.3	483.2
Technical provisions of participants*	101.8	198.4	220.4	254.1
Proportion of participants	29%	51%	52%	53%
Countries	Germany Austria Switzerland	Germany Austria Switzerland	Germany Austria Switzerland Luxembourg	Germany Austria Switzerland Luxembourg
*in billion euros				

Figure 14 shows the ratio of direct insurers, reinsurers and captives in the group of participants. 55 direct insurers, 22 reinsurers and four captives participated in this study, with six companies classifying themselves as both direct insurers and reinsurers. Like Eling and Pankoke (2013), the group of participants is dominated by direct insurers.[23] Nevertheless, due to the high percentage of reinsurers we can analyse the viewpoints of direct insurers and reinsurers regarding selected fields separately. When this study is compared to the KPMG studies, please note that the composition of the group of participants was different. We will make it clear wherever separate results for direct insurers and reinsurers are presented. The high number of participating direct insurers once more underlines the significance of run-off and the increasing relevance of the issue for the German-speaking market, as global reinsurers and national insurers alike are now interested in it.

The viewpoints of direct insurers and reinsurers can be considered separately again.

[23] In KPMG (2007), a significantly higher number of reinsurers took part; and in KPMG (2010), the ratio between direct insurers and reinsurers was balanced out.

Figure 14: Type of participating company



German and Swiss insurance companies are relatively highly represented amongst the participants.

Figure 15 shows a percentage-based breakdown of the countries of incorporation of the companies participating in this study compared to KPMG (2010) and Eling and Pankoke (2013). Like Eling and Pankoke (2013), Swiss insurance companies are the most highly represented in the group of participants (45%), followed by German (36%), Austrian (14%) and Luxembourgian (5%) companies. The large presence of Swiss companies amongst the participants has three possible causes (see Eling and Pankoke, 2013). First of all, it must be stated that the Institute of Insurance Economics of the University of St.Gallen has deep roots in Switzerland. A second possible cause is the greater relevance of run-off for Swiss insurers, as Switzerland has had a risk-based regulatory system in the Swiss Solvency Test since 2006 which became mandatory in 2011. The third possible cause is that numerous reinsurers, including international players, are represented in Switzerland and run-off is of particular relevance to reinsurers.

Figure 15: Registered offices of the companies (basis: number of answers)



The percentage distribution of the countries of incorporation in the study carried out by KPMG (2010) is not balanced: Germany is the most common country of incorporation (83%), followed by Switzerland (13%) and Austria (4%). In terms of countries of incorporation, the group of participants is more balanced in Eling and Pankoke (2013) and in this study. The same conclusion is reached if the percentage distribution of the countries of incorporation is based on the stated technical provisions (see Figure 16). In this situation, Germany is even more highly represented in the KPMG studies (89% in 2007 and 97.8% in 2010). Therefore, only Eling and Pankoke (2013) and this study allow for effective country comparisons.[24]

[24] Please note that the information on Austria and Luxembourg is based on a relatively small sample. Therefore, the following company comparisons focus on Germany and Switzerland. Suitably large samples are available for these countries.

Figure 16: Countries of incorporation of the participants (basis: reported technical provisions)

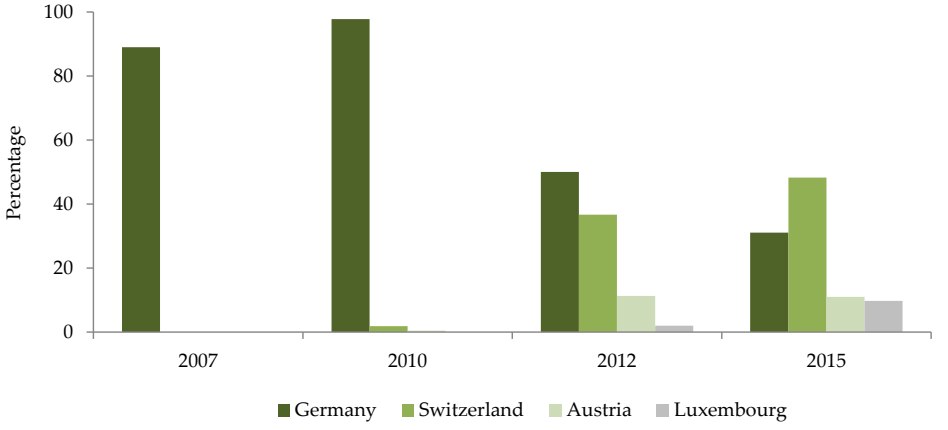


Figure 17 shows a percentage-based breakdown of the countries of incorporation of the parents of the participating insurers. Similar to the conclusions on the company headquarters, Germany and Switzerland are the most common countries of incorporation for the parent companies; the ratio between the two countries is relatively balanced here, too. Great Britain, France, Bermuda and Austria are the next most popular countries of incorporation. This confirms the results of Eling and Pankoke (2013): run-off is of great significance to subsidiaries of insurers based in Bermuda, presumably due to the attractiveness of the location for reinsurers, and is increasing in significance in Austria. For the first time, the group of participants in this study also includes companies with parent companies based in Malta, Russia, Italy, Ireland and Japan.

Run-off is of great significance to the subsidiaries of insurers based in Bermuda.

Figure 17: Headquarters of the parent companies in percent

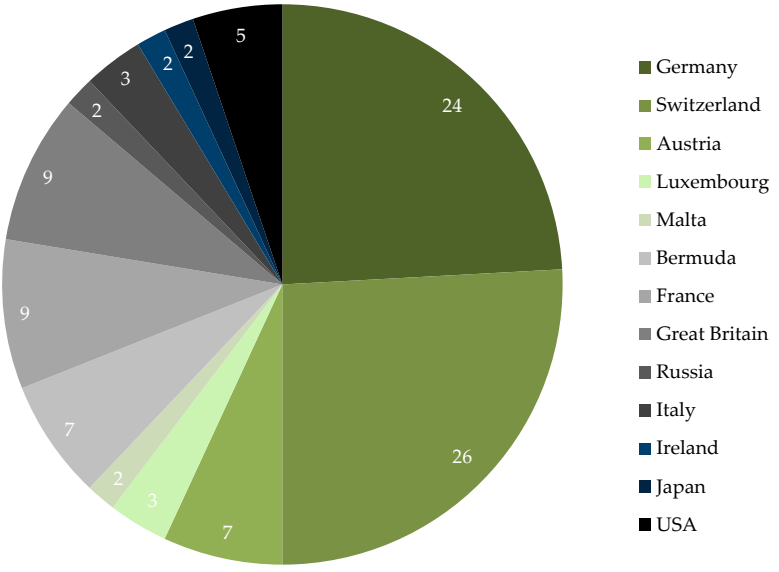
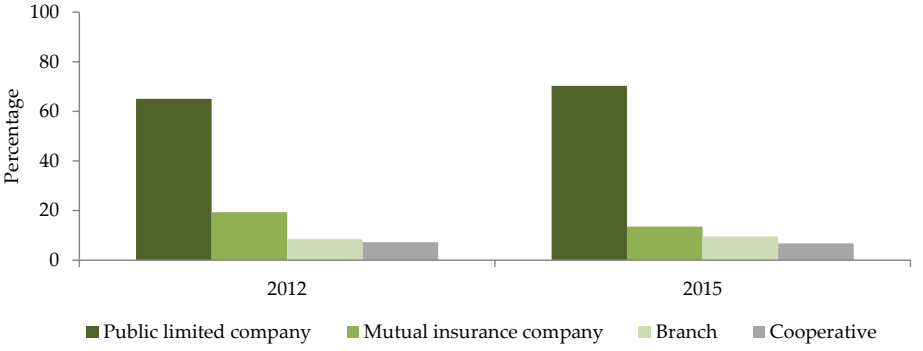


Figure 18 considers the percentage-based breakdown of the legal structures of the participating companies. This study paints a similar portrait to Eling and Pankoke (2013): public limited companies (Aktiengesellschaften) are the most highly represented with 70.3% (2012: 65.1%), followed by mutual insurance associations with 13.5% (2012: 19.3%), branches with 9.5% (2012: 8.4%) and cooperatives with 6.8% (2012: 7.2%). Like Eling and Pankoke (2013), the group of participants in this study does not include any public insurance companies. The previous studies carried out by KPMG largely focus on public limited companies (Aktiengesellschaften) (91% in 2007 and 83% in 2010).

Public limited companies (Aktiengesellschaften) remain more familiar with run-off.

Figure 18: Legal structures of the participants



The participating insurance companies are somewhat larger compared to Eling and Pankoke (2013).

Figure 19 shows the average recognised premiums and technical provisions of the participating companies.[25] Based on recognised premiums, Swiss insurers are on average the largest, although based on average reserves Luxembourgian companies are the largest. Overall, with 1.8 billion euros in premiums (2012: 0.9 billion euros) and 3.4 billion euros in provisions (2012: 2.9 billion euros), the companies participating in this study are on average somewhat larger than in Eling and Pankoke (2013). This result might reflect the fact that run-off is growing in significance, especially for larger companies.[26] According to the participating companies, 23.2% of the total premiums are being ceded (2012: 21.9%).

[25] Only participants who provided information on the country of incorporation of their company as well as on recognised premiums and technical provisions were used in the calculation.

[26] However, comparing the median sizes with Eling and Pankoke (2012) produces largely identical results; the averages in this study are influenced by a few particularly large companies.

Figure 19: Recognised premiums and gross technical provisions of the companies (in million euros)

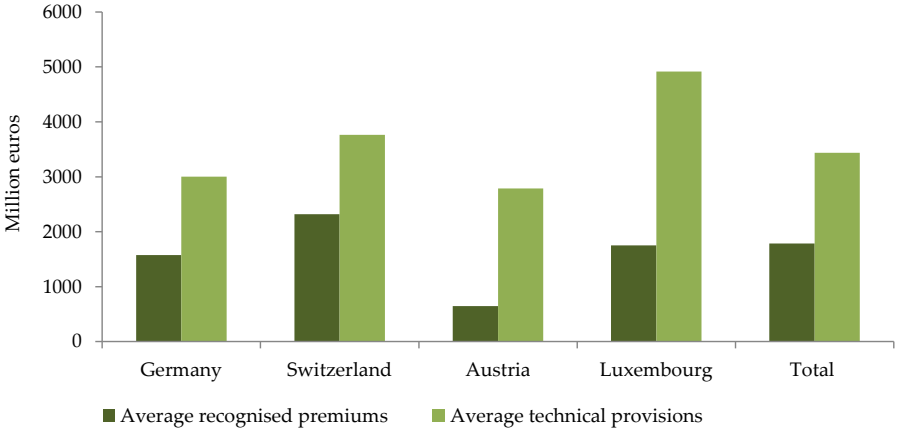
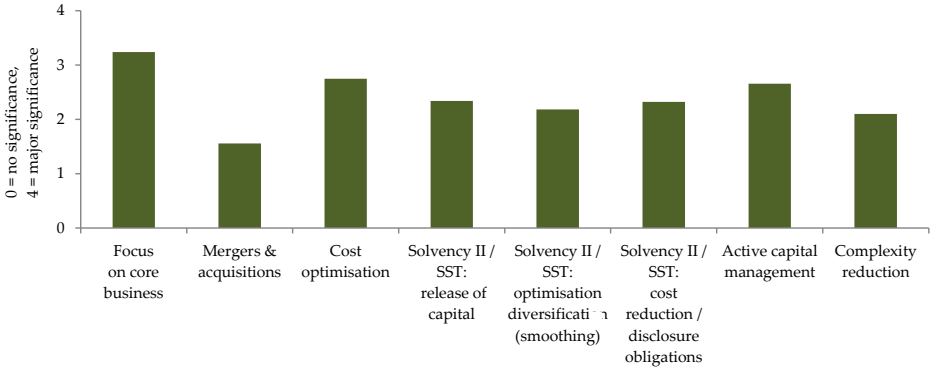


Figure 20 describes the participants based on their strategic orientations; previous studies did not consider this, so the results cannot be compared with past results. On average, concentration on core business is the most significant; the optimisation of costs is the second most important, being of almost the same significance as active capital management. Aspects of Solvency II (release of capital, optimisation diversification, cost reduction / disclosure obligations) have on average a medium level of significance for the strategic activities of the participants. One possible cause of this is that the preparations for Solvency II were made in previous years and are largely complete. In this context, comparisons with the results of Eling and Pankoke (2013) are particularly interesting for the purposes of analysing whether or not differences are emerging that can be attributed to the influence of Solvency II.

In the current market landscape, the participating companies are mainly focused on their core business.

Figure 20: Main drivers of strategic activities



3.2.2 Run-off portfolios

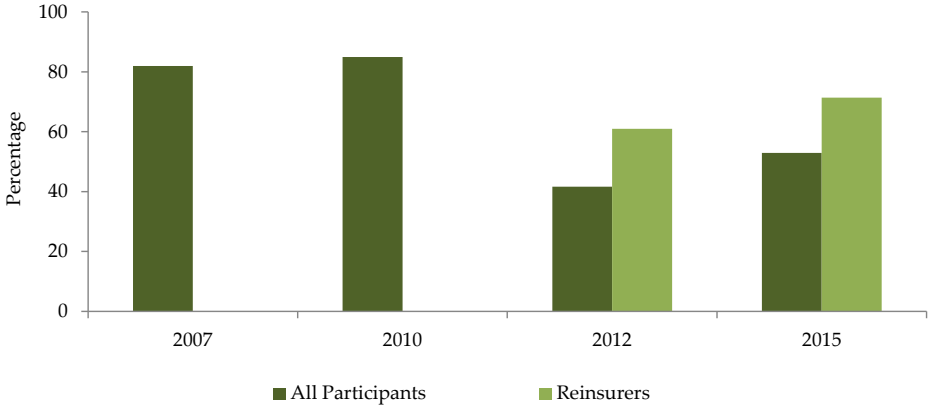
- 52.9% of the participating companies have run-off portfolios.
- For companies with run-off, the run-off portfolio represents 42.6% of their reserves.
- Reinsurers are more heavily involved than direct insurers.

Figure 21 shows the percentage of participating companies that answered yes when asked if there was 'inactive business', i.e. business that was no longer underwritten (run-off), in their companies in 2012 and 2015, including with separate statistics for reinsurers. In this study, 52.9% (2012: 41.7%) of the participants stated that there was run-off in their companies. If only reinsurers are considered, the percentage is 71.4% (2012: 60.9%). Therefore, there is significantly more run-off amongst the participants compared to Eling and Pankoke (2013). This might be an indication that run-off has increased following the preparations for Solvency II. Overall, however, the average value is lower than in the KPMG studies of 2007 and 2010; this can be traced back to the aforementioned compositions of the groups of participants. The separate proportion for reinsurers – who have proven to be highly experienced with run-off – is closer to the results of the KPMG studies in which reinsurers were much more highly represented within the group of participants.

More companies have run-off compared to 2012.

Run-off is more widespread amongst reinsurers than it is amongst direct insurers and captives.

Figure 21: Percentage of companies with run-off



Eight companies in the group of participants are completely in run-off.

Companies with run-off estimate that 42.6% of their provisions for outstanding claims are in run-off (2012: 42.0%). There are eight companies in the group of participants that place the proportion of provisions at 100%. The proportion is 56.3% (2012: 62.1%) when only reinsurers are considered. In KPMG (2007) and KPMG (2010), the proportion was estimated to be 34% and 29% respectively.

All participating Luxembourgian insurers have run-off portfolios.

Figure 22 presents the results broken down by country. The percentage of companies with run-off in Luxembourg is particularly high. All participating Luxembourgian companies have run-off portfolios which represent around 37.3% of the technical provisions. The proportion of companies with run-off in Germany and Switzerland is relatively balanced at just over 50%; the proportions of provisions in run-off are 42.3% (Germany) and 46.7% (Switzerland). The relatively low percentage of provisions in run-off in Austria (2.0%) is remarkable, although only one participant quantified the proportion here.

The breakdown by legal structure shows that run-off has a visibly higher relevance to public limited companies (Aktiengesellschaften). 60.4% (2012: 48.1%) of the participating public limited companies (Aktiengesellschaften) have run-off portfo-

lios, whereas just 14.3% (2012: 26.7%) of mutual insurance companies have run-off portfolios. Based on the technical provisions, at 20.0% run-off is less frequent in mutual insurance companies than in public limited companies (Aktiengesellschaften) (46.5%; 2012: 48.6%). This underlines the conclusion of Eling and Pankoke (2013) that the results can potentially be explained by the use of various management instruments in public limited companies (Aktiengesellschaften) and mutual insurance companies. We must assume that public limited companies (Aktiengesellschaften) are moved to discontinue fields of business if the defined capital returns are not achieved (see 2.3.1) as these companies are focused on returns.

The increased relevance of run-off for public limited companies (Aktiengesellschaften) might be due to their stronger focus on profitability.

Figure 22: Companies with run-off and its proportion in the provisions



Figure 23 shows the existence of run-off in various lines of business of loss insurance. Run-off varies by line of business. The volume of run-off is largest in general liability insurance, as reflected in all previous studies. For one, liability insurance is characterised by long run-off periods and major uncertainty in terms of future losses. Both are key reasons to send business in run-off (see 2.3.1). Additionally, run-off portfolios are visible for several decades in this line of business, provided that underwriting activities have been discontinued and no steps

Run-off is more distinct in long-tail lines of business.

Long-tail lines of business are mainly characterised by long run-off periods and uncertainty in terms of future losses.

Many companies in the field of vehicle insurance, which is characterised by high price pressure, have run-off portfolios.

have been taken to reduce them. In this study, vehicle insurance also features high run-off portfolios. This line of business is primarily characterised by high price pressure and therefore also by declining profitability, which is another key reason to send business in run-off (see 2.3.1).

In Eling and Pankoke (2013), there are high run-off portfolios in credit insurance. One possible cause is cited as being the fact that credit insurance and insurance services that are closely linked to the financial markets became less attractive after the financial crisis. This result highlights the influence of general economic developments on run-off activities. Credit insurance is less widespread in this study, which underlines the conclusion as to the influence of the general economic circumstances as the years from 2012 to 2015 were economically successful in the German-speaking countries. If the results of this study are compared with all the previous studies, there proves to be variation not only in terms of the scope of run-off portfolios over the various lines of business, but also within the lines of business over time.[27]

The general economic developments influence run-off.

In the reinsurance industry, the run-off volume is larger in long-tail lines of business.

If only reinsurers are taken into consideration, general liability and vehicle insurance are the two largest lines of business; the volume of the latter line of business is considerably higher (+17%) compared to the total group of participants. Additionally, the participating companies stated that they had run-off portfolios for terrorism, marine liability, APH and contingency.

In the German-speaking countries there are run-off portfolios worth 133.5 billion euros (projected based on the survey).

Based on the results of the survey, in the German-speaking countries there are projected run-off portfolios worth 133.3 billion euros (2012: 103.5 billion euros).[28] This result is

[27] When interpreting the results, please note that the number of respondents in the various studies was different. In this regard, a comparison of the years reflects two effects that cannot be separated from one another: changes in the relevance of run-off and changes in the number of respondents.

[28] Like Eling and Pankoke (2013), the run-off market volume was estimated on the basis of linear extrapolations as the percentage of companies with

consistent with similar studies. In Germany and Switzerland alone, PwC (2015) and PwC (2013) estimate the volume of run-off to be 111 billion euros and 99 billion euros respectively. KPMG (2010) indicates a market volume of 115 billion euros for Germany, Switzerland and Austria. The increased volume of run-off compared to Eling and Pankoke (2013) has two possible causes. The total volume of the market might have increased significantly. Alternatively, larger companies on average, for which run-off is generally more relevant, are represented in the group of participants in this study.

Figure 23: Percentage of run-off portfolios in various lines of business



Figure 24 provides an overview of the age of the business in run-off on the date of the survey in each line of business. The information provided by the participants regarding the underwriting year of now inactive business was evaluated; multiple answers were accepted. Like Eling and Pankoke (2013), most of

run-off multiplied by the percentage of run-off in the reserves multiplied by the market volume of the (gross) technical provisions. Direct insurers and reinsurers are considered separately.

The majority of current run-off business was underwritten between 1993 and 2008.

the participants indicate that the business was underwritten between 1993 and 2008. These underwriting years were most frequently specified for general liability insurance. These results reflect the aforementioned typical long-tail character of the line of business. In contrast, run-off portfolios in the fields of legal protection and transport concern more recent underwriting years. Premium payments and settlements are most often closer together. However, underwriting years before 1970 are highly unlikely for vehicle insurance and general liability, reflecting beliefs rather than reality.

Figure 24: Underwriting year of run-off portfolios in various lines of business

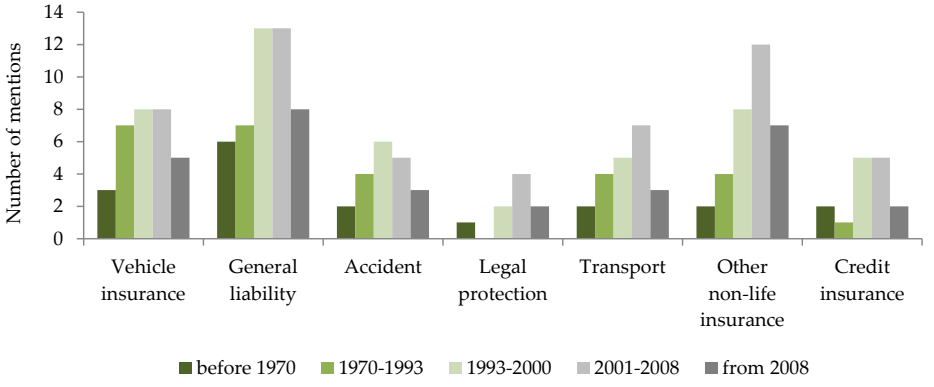


Figure 25 shows the expected future run-off period of run-off portfolios in each line of business; as this aspect was not examined in previous studies, comparisons cannot be made over time. It is evident that run-off portfolios in vehicle and general liability insurance do not only date back to early underwriting years (see Figure 24), but that the participating companies in these lines of business will also remain exposed to risk for up to 20 years or more. The run-off period in the field of accident insurance, where pension payments in particular draw out the process, is similarly long. The participating companies in legal protection, transport and other non-life insurance will remain

Companies will remain exposed to risks resulting from the run-off portfolios for up to 20 more years.

exposed to risk for a much shorter time; in these lines of business, run-off portfolios can be wound up much more quickly due to their temporary nature.

Figure 25: Years remaining until the complete winding up of run-off portfolios in various lines of business

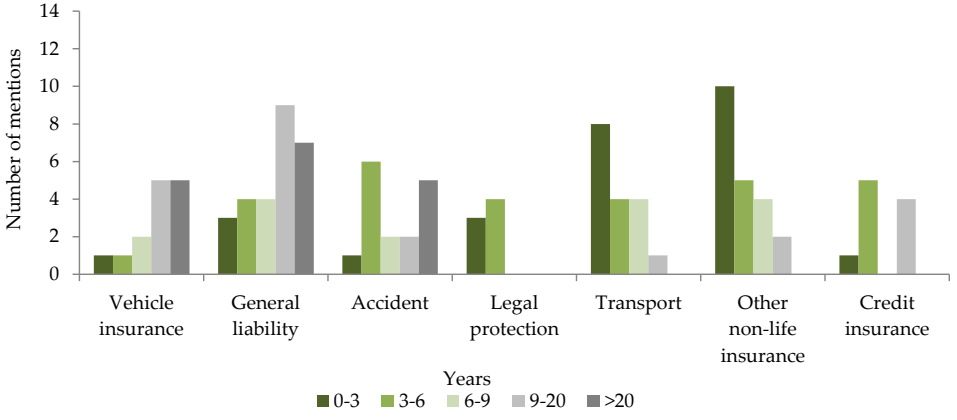


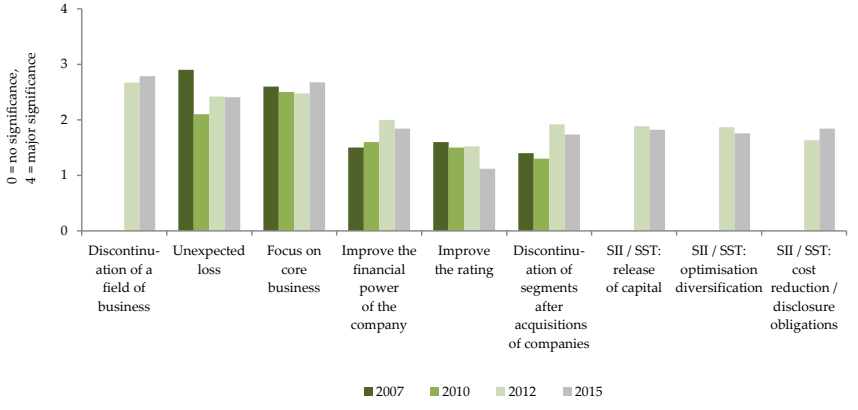
Figure 26 shows the reasons and their significance to the discontinuation of underwriting activities in a field of business. The results confirm that the introduction of run-off is inspired by numerous reasons (see 2.3.1). The participating companies stated that the main reasons to discontinue a line of business were unexpected losses and a focus on their core business. Like Eling and Pankoke (2013), due to market consolidations and the improvement of financial strength, run-off is playing a larger role in this study than in the KPMG studies. The high significance of the improvement of financial strength can be due to the introduction of Solvency II, as the higher capital requirements set out by the new regulations are associated with run-off. However, the significance is lower when compared to Eling and Pankoke (2013), which might indicate that the participating companies have already taken steps to prepare for Solvency II in the past.

The introduction of run-off is predominantly the result of strategic withdrawals, unexpected losses and a focus on core business.

Companies might have started preparing for the introduction of Solvency II in the past.

This conclusion is reinforced when we consider that the participating companies attribute lesser importance than in Eling and Pankoke (2013) to two of the three aspects that expressly refer to Solvency II and the SST. Overall, a medium level of significance is attributed to the Solvency II aspects.

Figure 26: Significance of reasons to discontinue underwriting activities



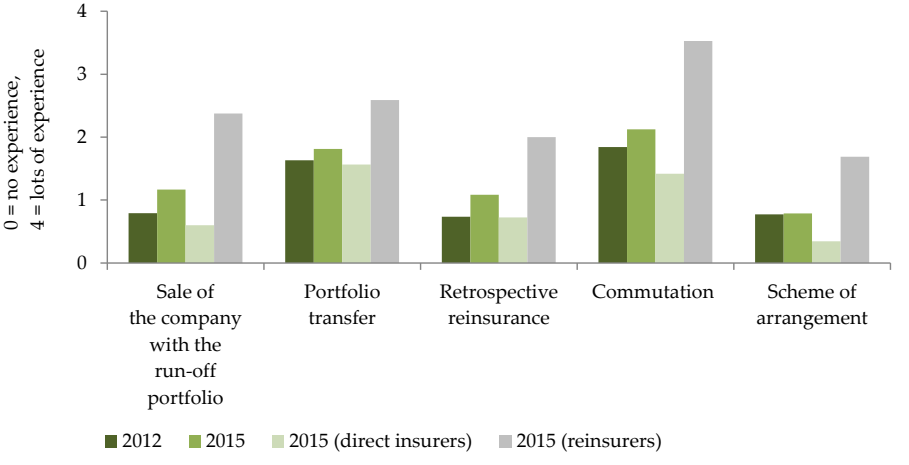
In addition to the aspects described in Figure 26, the participating companies provided other reasons: 'products that no longer conform to the market', 'lower profitability of the line of business' and 'regulatory reasons'.

3.2.3 Active management of portfolios in run-off

- 30.2% of insurers are actively reducing their run-off portfolios.
- The proportion of actively reduced run-off in the entire reserves is on average 51.5% for companies that are actively reducing run-off.
- Insurers have the most experience with commutation as a management instrument for reducing run-off portfolios.

In this study, we consider four management instruments for actively reducing run-off (see section 2.2): sale of the company, portfolio transfer, retrospective reinsurance and commutation. The scheme of arrangement is treated as a special type of commutation. Figure 27 shows which methods have already been used by the participants to actively reduce their run-off portfolios.

Figure 27: Experience with methods



Commutation is the most popular instrument for actively reducing run-off.

Like Eling and Pankoke (2013), the participating companies name commutation as the method with which they are most experienced. This result is also reflected in KPMG (2007) and KPMG (2010). The participants were asked about the suitability of the methods for active run-off management. In both studies, the participants believed that commutation was the most suitable method. The portfolio transfer is the method with which the participating companies were most experienced after commutation.[29] This result is also consistent with Eling and Pankoke (2013). On average, the participants are much less experienced with the other methods (sale of the company, retrospective reinsurance and schemes of arrangement). If we differentiate by the type of insurance company, we see that reinsurers are on average more experienced with all of the methods than direct insurers. Reinsurers prove to be much more experienced, especially with commutation. This shows that commutation is particularly suited to reinsurance policies (see section 2.2).

Portfolio transfers are another widespread instrument.

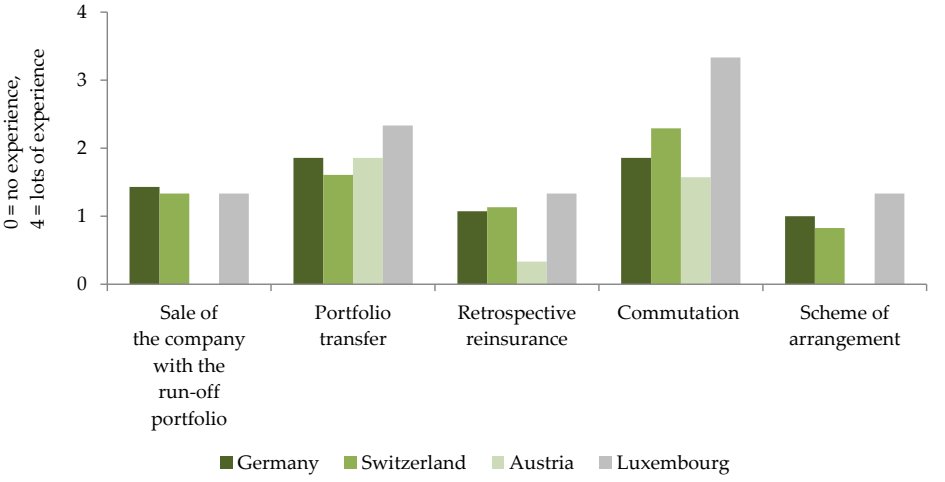
Reinsurers are more experienced with active run-off management.

Figure 28 differentiates the insurance companies' experience with active run-off reduction methods by country. Across all of the countries, the participants are most experienced with commutation and portfolio transfers. This highlights the robustness of the results even in a country comparison. However, Luxembourgian insurers appear to be slightly more experienced. Eling and Pankoke (2013) documented a relatively low level of experience for Luxembourg. However, only three insurers answered this question in this study and only five insurers answered it in Eling and Pankoke (2013). Another differentiation by public limited companies (Aktiengesellschaften) and mutual insurance companies shows that public limited companies (Aktiengesellschaften) are generally more experienced with the methods. The differences in experience are particularly large for commutation and portfolio transfers.

Public limited companies (Aktiengesellschaften) are more experienced with active run-off management.

[29] At this point we cannot be any more specific as to what the term 'experience' means. This means that in some cases the company might have been involved in such transactions, whereas in others it might merely have obtained information from the trade press.

Figure 28: Experience with methods broken down by country



Active run-off management is becoming more relevant over time.

In 30.2% of the participating companies, there are run-off portfolios that are actively being reduced (2012: 26.3%). In the subgroup of reinsurers, at 50.0% the proportion is even higher (2012: 45.5%). The companies estimate that 51.5% of their total technical provisions are in run-off and are actively being reduced (2012: 49.3%). If we only consider reinsurers, 57.4% of the reserves are in run-off and are actively being reduced (2012: 69.8%). Another breakdown by country and legal structure shows that Swiss (33.3%) and Luxembourgian (33.3%) insurers as well as public limited companies (Aktiengesellschaften) (37.5%) in particular are actively reducing their run-off portfolios.

Run-off portfolios in long-tail lines of business in particular are being actively managed.

Figure 29 shows the scope of the run-off portfolios in each line of business that are actively being reduced. Eling and Pankoke (2013) do not show any key differences between the lines of business. However, the scope varies by line of business in this study. The distribution across lines of business somewhat matches the distribution in Figure 23 (percentage of run-off portfolios in various lines of business). The largest portfolios are in general liability and vehicle insurance. The accident and

legal protection lines of business were highly relevant in Eling and Pankoke (2013), whereas in this study the scope is lowest in these lines of business. The results for transport insurance and other non-life insurance are largely consistent with Eling and Pankoke (2013). If we only consider reinsurers, the scope increases in vehicle and general liability insurance in particular. Another breakdown by country shows that the portfolios are on average larger in Germany.

Figure 29: Scale on which run-off portfolios are actively being reduced by line of business

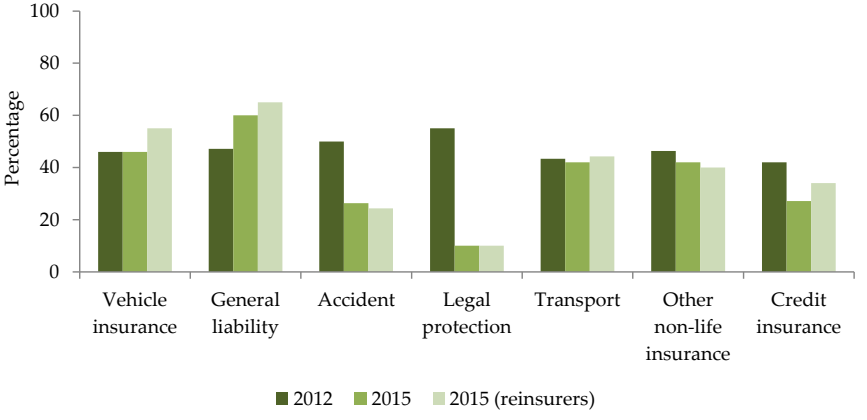


Figure 30 shows the relevance of various aspects to the active reduction of run-off portfolios. The participating companies stated that uncertainty in connection with losses was the most significant aspect. This is also stated as the main reason to actively reduce run-off portfolios in all previous studies. Once more, this result underlines that the active management of run-off portfolios remains a reactive measure taken to counter the volatility of settlements and the related uncertainty.

Run-off management remains a reactive measure.

Figure 30: Reasons to actively reduce run-off portfolios



Besides uncertainty in connection with losses, the administrative costs associated with run-off are an important reason to reduce these portfolios. The ratings of the Solvency II aspects (release of capital, optimisation diversification, cost reduction / disclosure obligations) have not changed, or only marginally, and are at the same level as in 2012. This shows that even in the future, Solvency II will have an influence over run-off activities. It also shows that the aspects relating to Solvency II in Figure 30 are of a relatively higher significance than in Figure 26 (reasons to discontinue underwriting activities).

Solvency II has a greater influence over the decision to carry out active run-off management than over the decision to send business in run-off.

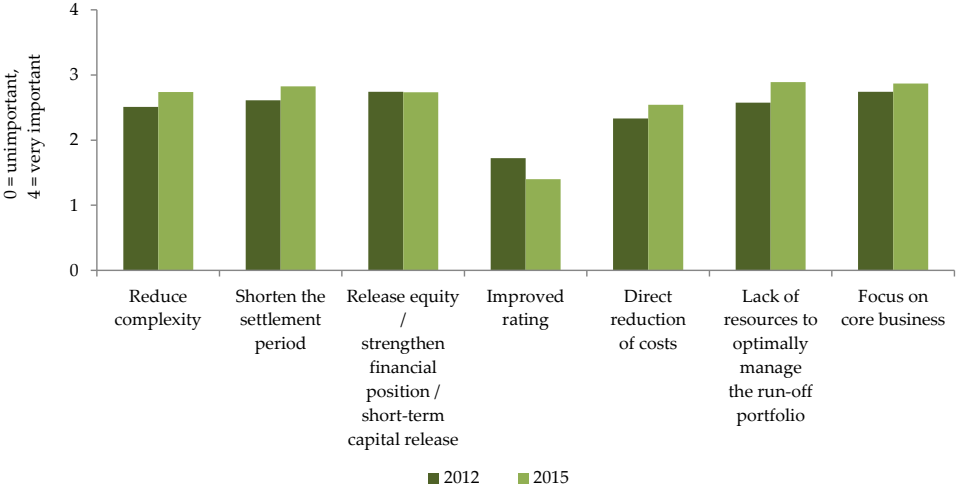
As in Eling and Pankoke (2012), the participants do not consider the fiscal implications to be of great significance. If we only consider reinsurers, the distribution paints the same picture. Breaking the results down again by the countries of incorporation of the companies shows that the concentration of run-off portfolios is of greater relevance to Swiss companies, whereas the SII and SST aspect of cost reduction / disclosure obligations is of less importance to insurers in this country. This might be due to the fact that the risk-based regulatory system has been in place in Switzerland since 2006.

Fiscal implications are of lesser significance to active run-off management.

External service providers can be engaged for actuarial and legal advice as well as to acquire and reduce run-off portfolios.

External service providers can be engaged to actively manage run-off. The spectrum of services on the run-off market is diverse, ranging from traditional corporate consultation, actuarial and legal advice to the transfer and reduction of run-off risks (see section 2.5.1). KPMG (2010) states that compared to KPMG (2007), an increased number of external service providers were taken into consideration. In this study, the participants were asked which reasons spoke for and against the externalisation of run-off portfolios.[30] Figure 31 and Figure 32 show the results.

Figure 31: Reasons to externalise run-off portfolios



The release of equity and the reduction of administrative costs are reasons to externalise run-off.

The reasons for externalisation can be split into two categories: the release of equity and the reduction of administrative costs relating to run-off. The second reason can be seen in the fact that the participating companies categorised concentration on core business, lack of resources, reduction of complexity and shortening of the run-off period as relevant. Overall, the relevance of these aspects has increased compared to Eling and

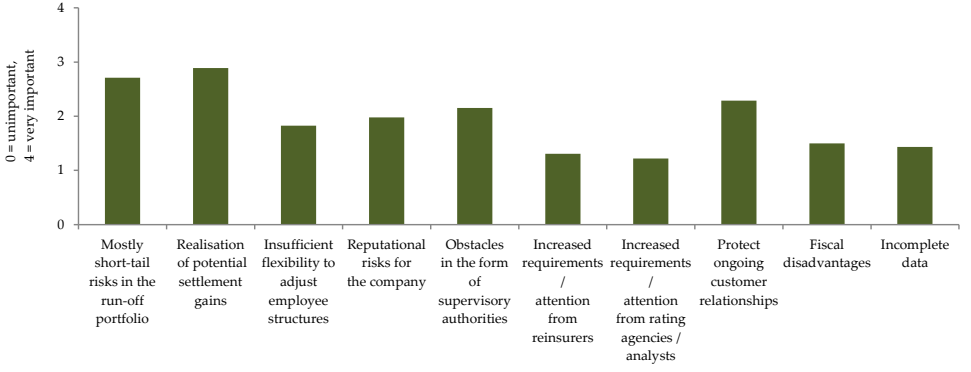
[30] The question regarding the reasons not to externalise run-off portfolios is new, so no comparisons can be made with the past. In KPMG (2007) and KPMG (2010), the participants were asked about aspects that discouraged active run-off management.

Pankoke (2013). Only the improvement of a company's rating is of less significance and, like in 2012, plays a lesser role.

Companies tend not to opt for externalisation if the run-off primarily concerns short-tail risks and if they do not wish to lose the opportunity to realise run-off profits. The reputational risk and the protection of customer relationships (see sections 2.2 and 2.3.2) are other important aspects which discourage companies from externalising their run-off portfolios. Additionally, the participating companies believe that regulatory hurdles are preventing the continued development of the external run-off market.

Companies tend not to externalise run-off if it concerns short-tail risks and if they expect to realise run-off profits.

Figure 32: Reasons not to externalise run-off portfolios

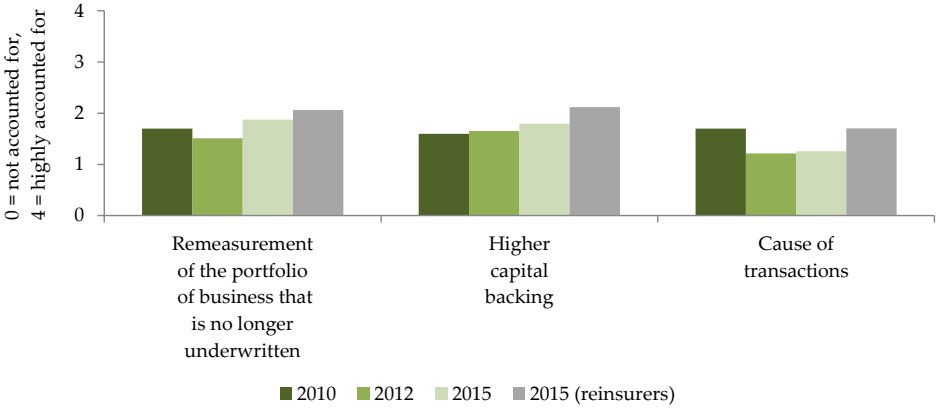


3.2.4 Implications of Solvency II / SST

- Reinsurers are more focused on run-off than direct insurers.
- German insurers are catching up in terms of run-off management.
- Active run-off management can reduce capital requirements under Solvency II.

The final section of the empirical analysis considers the implications of Solvency II and the SST. Figure 33 provides an overview of the run-off risks that are taken into consideration as part of the risk identification processes of the participating companies.

Figure 33: Run-off risks accounted for in connection with the risk identification process



The higher capital requirements for run-off under Solvency II are being paid increasing amounts of attention.

Overall, it is evident that the risks associated with run-off are growing in relevance. In particular, the higher capital backing of run-off portfolios is increasingly being taken into consideration (see section 2.3.2). However, when comparing the results over time, we must consider the aforementioned differences in the number of participants. Therefore, we have once more separated the results for the reinsurers. More attention is paid to

the risks in this subgroup. If we also differentiate by the countries of incorporation of the companies, we see a largely analogous picture for Germany and Switzerland (see Figure 34). Eling and Pankoke (2013) describe the large lead held by Switzerland, which implemented the risk-based regulatory system SST in 2006. The results of this study demonstrate that, through the introduction of Solvency II, Germany has caught up.

Risk-based regulatory systems are moving companies to focus on the risks associated with run-off.

Figure 34: Run-off risks accounted for in connection with the risk identification process, by country

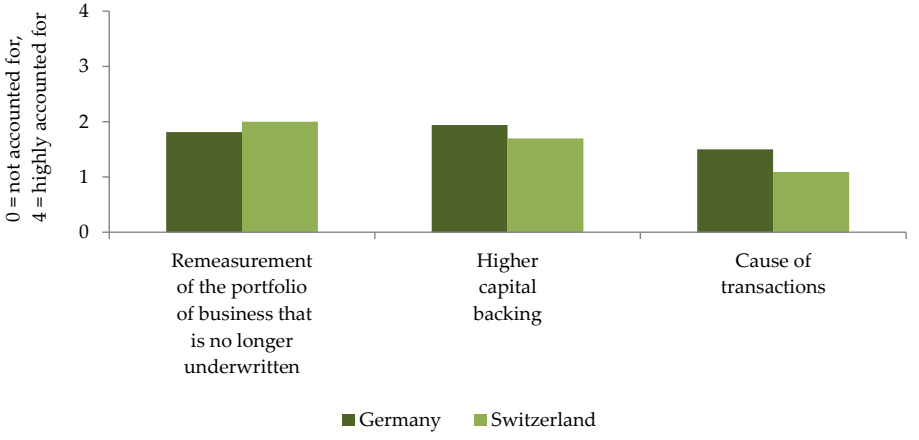


Figure 35 looks into the future and shows the main drivers that will influence run-off activities in the opinion of the participating companies. The participants identify a focus on core business as the most relevant driver. Additionally, risk reduction and aspects relating to Solvency II and the SST are playing a significant role. If we only consider the reinsurers, the significance of all the aspects is generally higher. It is also interesting that German insurers and mutual insurance companies consider the main drivers more significant than Swiss insurers and public limited companies (Aktiengesellschaften). The results are the reverse in Eling and Pankoke (2013).

Run-off activities are expected to increase, especially for the purposes of active risk reduction.

Figure 35: Main drivers of run-off activities in the future



3.3 Key results of the empirical analysis

The key results of the empirical analysis are set out in Table 8.

Table 8: Key results of the empirical analysis

1.	We see an increase in the percentage of companies with run-off portfolios and the proportion of run-off portfolios in the total technical provisions.
2.	The participating companies are more experienced with methods for actively reducing run-off.
3.	More companies are actively managing their run-off portfolios.
4.	The introduction of Solvency II and the SST are moving insurers in the German-speaking countries to pay increasing amounts of attention to the risks associated with run-off.
5.	Reinsurers and public limited companies (Aktiengesellschaften) are generally more experienced with run-off.

In addition to the key results, the empirical analysis produced the following two observations. Solvency II aspects are influencing the active reduction of run-off portfolios to a greater extent than considerations regarding the discontinuation of underwriting activities. Furthermore, at many points, the participating companies attribute relatively high relevance to focusing on core business – for example, in terms of the reasons to discontinue underwriting activities and for the externalisation of run-off.

In the following section, we consider the key conclusions of the second section and the results of the empirical analysis, and derive implications for the German-speaking run-off market.

4 Implications for the German-speaking run-off market

In our opinion, the conclusions of section 2 and the empirical results of section 3 produce seven main implications for the German-speaking run-off market. Table 9 summarises these implications. The seven implications were deliberately formulated in the form of argumentative hypotheses in order that they could be compared against the opinions of selected experts.

Table 9: Implications for the German-speaking run-off market

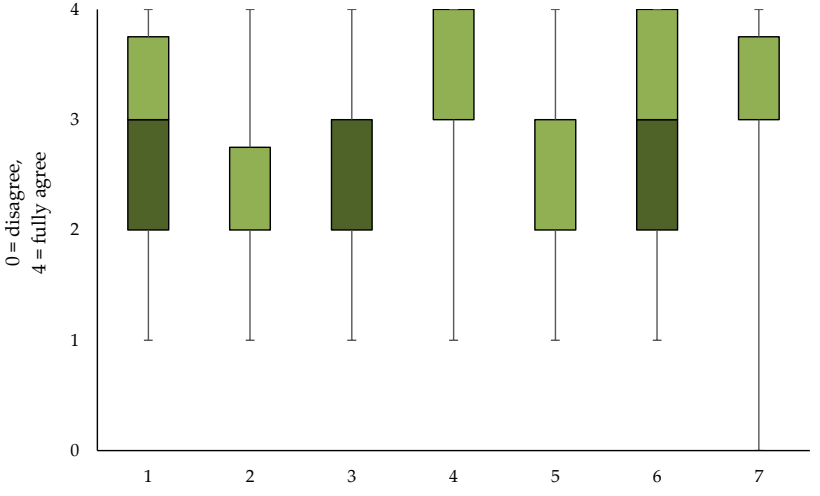
1.	In recent years, run-off has visibly evolved in German-speaking countries and has quickly grown in significance.
2.	At the moment, global reinsurers and specialist insurers as well as many national direct insurers, including small and medium-sized insurers, are focused on the matter of run-off.
3.	Due to Solvency II / the SST and the increasing focus on value, more and more technical provisions will be sent to run-off in the next five years.
4.	The active management of run-off will continue to grow in significance over the next five years.
5.	The externalisation of run-off is receiving greater support from supervisory authorities as well.
6.	The active management of run-off will also continue to be driven by demand (e.g., in the form of specialist run-off providers or settlement platforms).
7.	In 2020, run-off will be a matter for every insurance company in the German-speaking countries and will have fully established itself as a strategic equity management instrument.

Therefore, another survey of experts was carried out in February 2016 in order to validate the implications and find out more about the trend. In the survey, representatives of direct insurers and reinsurers, specialist run-off insurers and settlement platforms, brokers and rating agencies that have been linked with

run-off in the past were asked to evaluate these implications on a scale of 0 (do not agree) to 4 (completely agree). The participants could also leave comments and remarks on each implication and describe additional implications and trends for the German-speaking run-off market at the end of the survey. Selected remarks and comments will be discussed over the course of this section.

A total of 18 experts took part in the survey. Figure 36 summarises the results and illustrates the distribution of the responses using box whisker plots (minimum, 0.25 quantile, median, 0.75 quantile and maximum).

Figure 36: Agreement of the participating experts in terms of the seven implications



Additionally, we calculate the spread of the responses using the standard deviation in order to gauge the consistency / inconsistency of the experts with regard to the seven implications for the German-speaking run-off market. A low spread of responses means a relatively high consensus amongst the participants in the survey. A high spread of responses, however, means relatively high disagreement between the experts. Table

10 shows the standard deviation as well as the average response by the experts to each of the seven implications.

Table 10: Summary statistics of the expert survey

Implication	1	2	3	4	5	6	7
Mean	2.8	2.2	2.9	3.2	2.3	2.8	2.9
Standard deviation	0.92	0.88	0.86	0.90	0.7	1.11	1.08

The participating experts largely agreed with the first implication (positive past development of the German-speaking run-off market) (average: 2.8). This assessment reflects the regulatory innovations (e.g., the amendment of the German Insurance Supervision Act (VAG) of 2007, see section 2.5.1), the growing number of portfolio transfers (see section 2.5.2), the increase in run-off portfolios and the increased prevalence of active run-off management (see sections 3.2.2 and 3.2.2). Additionally, the relatively high average spread of responses (standard deviation: 0.92) highlights the relatively high consensus amongst the experts.

The comments and remarks provide additional information on the backgrounds of the experts' opinions. The following statements are to be categorised as relatively conservative. An expert states that 'in the German-speaking countries, run-off is still in the early stages of development and is not attributed enough significance. Run-off is often neglected within a company and transfers to run-off specialists are too infrequently considered.' Based on the volume within Europe, the German-speaking run-off market is taking on a central role, although there is still potential for development, primarily with regard to the maturity of the issue, especially compared to the British market. For example, PwC (2015) shows that, compared to continental European companies and viewed as a percentage, more than twice as many British and Irish insurers include aspects of run-off management as priorities on the agendas of their management boards.

Another expert remarks that the focus of run-off is still mostly on reinsurance portfolios; our empirical analysis and the previous studies also showed that reinsurers were more experienced with run-off, although direct insurers can be seen to have advanced over time. Other experts who believe that the implication is more relevant confirm that the increased focus on improving profitability, the generally higher acceptance of the issue, Solvency II and the stronger buyer's market have been key factors in contributing to the development of the run-off market.

'In the German-speaking countries, run-off is still in the early stages of development and is not attributed enough significance.'

For the second implication (run-off affects the full range of insurance companies), the participating experts are least in agreement compared to the other implications (average: 2.2). Additionally, the extremely low spread of responses (standard deviation: 0.88) highlights the relatively high consensus on this opinion. An expert provided the following explanation: 'The larger the insurance company, the more prepared it will be to actively consider active run-off management. Some smaller companies have not yet begun to address the issue.'

Given the remarks of another expert, we can conclude that whenever smaller insurance companies address the issue of run-off, they are primarily companies with an international orientation. The heterogeneous group of participants in our empirical analysis underlines the broad interest of various insurance companies in run-off; however, we cannot categorise the participants on the basis of features that would support this. Another expert confirms that small and medium-sized insurance companies are aware of run-off, but also that they are not fully aware of the potential value of run-off management: 'Run-off continues to be seen as something negative or problematic for direct insurers (something that you only deal with when you have to)'. At this point we must again state that, compared

to Eling and Pankoke (2013), larger companies on average took part in this empirical analysis.

> *'The larger the insurance company, the more prepared it will be to actively consider active run-off management. Some smaller companies have not yet begun to address the issue.'*

The third implication (risk-based regulatory systems will be a significant driver of run-off in the future) was met with broad agreement (average: 2.9) as well as the highest consensus (standard deviation: 0.86). This supports the results of the empirical analysis which indicate that run-off risks are increasingly being taken into consideration in risk strategies under Solvency II and the SST, and that run-off activities can generally be expected to increase, especially for the purposes of active risk reduction (see section 3.2.4). One expert confirms this 'rethinking process' and expects the first key changes to take place in 2016 before the Solvency Capital Requirement ratios are published in the following year. Another expert remarks that more attention is being paid to existing reserves due to the increased capital requirements of Solvency II and that the sale of run-off reserves is being contemplated as a way of reducing complexity (IT, reporting, human resources), provided that it would not trigger conflicts with customers. However, 'the pressure of the solvency capital margin in the loss and accident lines of business is currently not that high in Germany. The solvency margins in P&C under Solvency II are often 200% or higher.'

Another expert believes that the increasing regulatory requirements are threatening the continued existence of small direct insurers and reinsures, which might mean run-off for individual companies. However, another expert points out that although companies are taking Solvency II aspects into consideration when making decisions concerning run-off, there are / will be numerous other drivers as well. One expert believes that

the Solvency II / SST implications are of lesser importance than the motivation to improve operating performance.

'Ways of thinking are clearly changing and will lead to real changes in various companies in 2016 before the results (SCR ratios) are published in 2017.'

The fourth implication (increase in significance of active run-off management within the next five years) achieved the highest agreement (average: 3.2) and high consensus (standard deviation: 0.90). One expert sees this as an obvious conclusion, given the development of the run-off market so far and the increased attention being paid by insurance companies. The expert also believes the significance of run-off is increasing 'because the dissolution of outward business in order to generate a relevant portfolio (e.g., for a portfolio transfer) or of business volume and margin generation is being paid more attention'.

One expert mainly sees an increase in the significance of reinsurance solutions: 'Especially in the first stage, strategic concepts are being developed for the future orientation of companies and additional or adjusted reinsurance structures are being realised in order to generate short-term effects on statements of financial position, the SCR ratios, risk management, etc. without any protracted or uncertain negotiations or approval processes. The reinsurance solutions will be prioritised or used in a supporting role depending on the pressure exerted by the customer and are mostly temporary solutions rather than permanent instruments of finality. The needs of the customer will decide the prioritisation of available tools.'

Another expert considers the increase in significance realistic, 'provided that the other problem areas are actively addressed'. It is not known to which problem areas the expert is referring. However, these problem areas tend to be internal or industry-wide problem areas (e.g., low interest rates) rather than problem areas specific to run-off.

'[...] additional or adjusted reinsurance structures are being realised in order to generate short-term effects on statements of financial position, the SCR ratios, risk management, etc. without any protracted or uncertain negotiations or approval processes.'

With relatively low agreement (average: 2.3) and relatively little consensus between the experts (standard deviation: 0.97), the fifth implication is a controversial one (externalisation is receiving greater support from supervisory authorities as well). In section 2.5.2, we refer to the article BaFin (2014) and an interview with the president of BaFin (Hufeld, 2014) in which at least the German supervisory authorities take an open position with regard to run-off. However, an expert points out that although the marketability of run-off is also becoming more normal for the supervisory authorities, this will not necessarily go hand in hand with more support.

According to another expert, the statement applies to portfolio sales, although the need for information and requirements of supervisory authorities are growing larger and more complex. Additionally, two experts remark that run-off is viewed differently by different supervisory authorities; a 'greater formalisation and unification of processes for transferring obligations to third parties' would be ideal in this regard. Experts believe that the Swiss Financial Market Supervisory Authority (FINMA) and the German Federal Financial Supervisory Authority (BaFin) are both behind and need to catch up. In practice, there are still too many bureaucratic hurdles and the assessment of the supervisory authority is still too dependent on the individual opinions of the relevant agent. Additionally, an expert remarked that 'the supervisory authorities are often unable to gauge the risks and are therefore too restrictive in their solvency requirements on a transfer of obligations'.

Therefore, the perspective of the supervisory authority also greatly depends on the receiving company's assessment of the

externalised run-off business (see section 2.5.2). According to one expert, supervisory authorities are critical of purely private equity solutions in particular. The composition of the run-off portfolio is another important aspect in the assessment. For example, one expert states that, in the interests of consumer protection, supervisory authorities judge run-off portfolios differently if they mainly concern policies with natural people than if the portfolios mainly comprise policies with commercial clients.

'A greater formalisation and unification of processes for transferring obligations to third parties would be ideal.'

The sixth implication (development of the issue by specialist run-off providers) was met with high agreement by the participating experts (average: 2.8), although their assessments are the most wide-ranging of all the implications (standard deviation: 1.11). One expert who did not agree with the implication states that companies with active run-off management will not necessarily externalise or be more aware of run-off portfolio transfers in the future. Moreover, one expert explains that there is already a highly functional market that is also being driven by brokers. Another expert – one who strongly agrees with the statement – comments that 'for some time an increase in buyers in the German-speaking countries' has been evident.

'There is already a highly functional, active market there. Reinsurance brokers are also raising the issue with their customers.'

The final implication (establishment of run-off as a strategic instrument in every insurance company by 2020) provides an overall assessment and a medium-term outlook. The level of agreement (average: 2.9) is high, although the consensus (standard deviation: 1.08) is relatively low. One expert agrees with this outlook, predominantly because they believe that run-

off is a suitable tool for optimising capital management. However, another expert said that 'how to proceed with unprofitable insurance portfolios should already be an issue today'.

> *'How to proceed with unprofitable insurance portfolios should already be an issue today.'*

As part of the survey, the participants were able to leave further comments or remarks on the condition of the run-off market and name additional trends in connection with run-off in the German-speaking countries. The following aspects were noted:

- 'Run-off is evolving and is gradually emerging from the shadows to take centre stage. Everyone is realising that it is not something negative and is simply part of the reinsurance or direct insurance cycle.'
- 'Responses are influenced by the viewpoint on the captive management market.'
- 'The future development of the run-off market is contingent on the general legal conditions. Part VII in the UK and similar portfolio transfer mechanisms approved by the regulators / courts dramatically spurred on the development of the run-off market in the past. Otherwise, the alternatives are relatively limited to reinsurance solutions or sales of corporate bodies.'
- 'Some insurers, but perhaps also BaFin, still have reservations about the often unguided, PE-financed risk carriers that specialise in the acquisition of portfolios to be wound up.'
- 'Retrospective reinsurance is insufficiently / not clear. Likewise, there is no position on schemes of arrangement and their significance for the German market.'

> *'Run-off is evolving and is gradually emerging from the shadows to take centre stage. Everyone is realising that it is not something negative and is simply part of the reinsurance or direct insurance cycle.'*

5 Summary

This study pursues two key objectives. It sets out the theoretical principles of core aspects of run-off. It also obtains findings by means of a market and expert survey which allow us to draw conclusions on the current market situation and paint a picture of future developments.

Run-off is establishing itself as a management instrument in the German-speaking countries.

In summary, the empirical results underline that run-off is becoming increasingly established as a management instrument in the German-speaking countries. This is reflected by the following key results in particular. Compared to 2012, the percentage of run-off portfolios in the total technical provisions is increasing. The main reasons for the discontinuation of underwriting are the discontinuation of a field of business, unexpected business developments and concentration on core business. Run-off is mainly of relevance to lines of business with long run-off periods. Additionally, it is evident that more and more insurers are actively reducing their run-off portfolios. Commutations and portfolio transfers are the most popular methods of doing so. The release of capital, the uncertainty of future losses and the reduction of administrative costs are key reasons for active run-off management.

Larger companies and reinsurers are more experienced with run-off.

However, the empirical analyses also show that smaller insurance companies in particular have relatively little experience with run-off. Run-off can generally be a useful tool for smaller companies – the externalisation of run-off, specifically – to reduce increased complexity within their companies (e.g., due to regulatory requirements). Additionally, reinsurers are still more experienced with run-off than direct insurers. With regard to the implications of Solvency II, compared to 2012 more attention is paid to risks relating to run-off in the risk strategy under Solvency II / SST. Solvency II will continue to play a key role for the run-off market in the future, as companies remeasure (run-off) reserves in terms of their capital requirements and

Solvency II is a key factor for the run-off market.

run-off will continue to be used to release capital and reduce complexity.

Regulatory law, public perception and market consolidation are important aspects for the future development of the run-off market.

The future development of the German-speaking run-off market will also depend heavily on regulatory law and the supervisory authorities. Trust will be a major aspect in this context; negative headlines in connection with run-off could quickly cause externalisation activities to stop. On the other hand, any consolidation process could spur on the issue of run-off in the market.

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'Run-off and Solvency II / Swiss Solvency Test (SST)' market survey

Thank your for participating in our survey. Please send us your feedback by post or online at http://www.unip-ark.de/uc/runoff2016e by 4 December.

'Run-off' is defined as follows in this questionnaire:

Run-off: No longer underwritten business which no longer generates premiums but for which technical provisions and liabilities still exist.

Actively dealing with run-off portfolios: Run-off portfolios that are actively reduced using the following methods: company transfer (share deal): an entire company with a portfolio of business that is no longer underwritten is sold. Insurance portfolio transfer: a portfolio of business that is no longer underwritten is transferred to another company (e.g., under Section 121 f of the Insurance Supervision Act [VAG] in Germany). Retrospective reinsurance: A reinsurance policy is taken out for the portfolio of business that is no longer underwritten; the policy covers all claims which arise from the run-off portfolio (normally a combination of adverse development cover and loss portfolio transfer). Commutation: a company and the policyholder agree to lift the insurance cover (this is normally only between direct insurers and reinsurers or two reinsurers).

A. General questions

1. Please describe the type of your company:

☐ Direct insurance ☐ Reinsurance ☐ Captive

2. What legal structure does your company have?

☐ Public limited company [Aktiengesellschaft] ☐ Mutual insurance company

☐ Public insurance company ☐ Branch ☐ Cooperative

3. Please indicate where your company is based:

a. Country of incorporation:

☐ Germany ☐ Switzerland ☐ Asutria ☐ Luxembourg

b. Sitzland der Muttergesellschaft: .....

4. How large is your company?

a. Recognised premiums: million euros or million CHF

b. Gross technical provisions: Million euros or million CHF

What percentage of its total premiums does your company cede to others? ..... ……..%

5. What do you see as the **main drivers** which influence **strategic activities** in your company? (Please provide more information for each aspect.) *0 = no significance, 4 = major significance*

		0	1	2	3	4
a.	Focus on core busines	☐	☐	☐	☐	☐
b.	Mergers and acquisitions: Fusion, acquisition and sale of companies	☐	☐	☐	☐	☐
c.	Cost optimisation	☐	☐	☐	☐	☐
d.	Solvency II / SST:					
-	Release of capital	☐	☐	☐	☐	☐
-	Optimisation diversification (smoothing)	☐	☐	☐	☐	☐
-	Cost reduction / disclosure obligations	☐	☐	☐	☐	☐
e.	Active capital management	☐	☐	☐	☐	☐
f.	Complexity reduction	☐	☐	☐	☐	☐
g.	Other: (please specify)	☐	☐	☐	☐	☐

B. Run-off

6. **Does your company** have inactive business, i.e. business that is no longer underwritten (**run-off**), for which there are still provisions or for which there are no longer provisions, but which will potentially incur late losses?

☐ Yes ☐ No

If yes, please describe the **structure of your existing loss reserves** in run-off:

a. What do you estimate the **percentage of provisions to be for outstanding claims** concerning business that is no longer underwritten? ..... %

b. Please indicate the **scale of run-off** in each line of business of your company. (Please rate each line of business.)

		0%-20%	20%-40%	40%-60%	60%-80%	80%-100%
a.	Vehicle insurance and motor liability	☐	☐	☐	☐	☐
b.	General liability	☐	☐	☐	☐	☐
c.	Accident	☐	☐	☐	☐	☐
d.	Legal protection	☐	☐	☐	☐	☐
e.	Transport	☐	☐	☐	☐	☐
f.	Other non-life insurance	☐	☐	☐	☐	☐
g.	Credit insurance	☐	☐	☐	☐	☐
h.	Other: (please specify)	☐	☐	☐	☐	☐

c. For each line of business, please indicate when the business that is now in run-off was underwritten. (Please rate each line of business. Multiple answers may be required.)

		before 1970	1970 -1993	1994 -2000	2001 -2007	from 2008
a.	Vehicle insurance and motor liability	☐	☐	☐	☐	☐
b.	General liability	☐	☐	☐	☐	☐
c.	Accident	☐	☐	☐	☐	☐
d.	Legal protection	☐	☐	☐	☐	☐
e.	Transport	☐	☐	☐	☐	☐
f.	Other non-life insurance	☐	☐	☐	☐	☐
g.	Credit insurance	☐	☐	☐	☐	☐
h.	Other: (please specify).....	☐	☐	☐	☐	☐

d. For each line of business, please indicate the average number of years for which your company has been exposed to a (residual) risk in the discontinued lines of business. (Please rate each line of business. Multiple answers may be required.)

		0-3	3-6	6-9	9-20	>20
a.	Vehicle insurance and motor liability	☐	☐	☐	☐	☐
b.	General liability	☐	☐	☐	☐	☐
c.	Accident	☐	☐	☐	☐	☐
d.	Legal protection	☐	☐	☐	☐	☐
e.	Transport	☐	☐	☐	☐	☐
f.	Other non-life insurance	☐	☐	☐	☐	☐
g.	Credit insurance	☐	☐	☐	☐	☐
h.	Other: (please specify).....	☐	☐	☐	☐	☐

7. In your opinion, what was the **significance** of the following aspects in the **decision to discontinue** underwriting activities (that was normally made in the past)? (Please provide an estimate for each aspect.) *0 = no significance, 4 = major significance*

		0	1	2	3	4
a.	Discontinuation of a field of business	☐	☐	☐	☐	☐
b.	Unexpected loss	☐	☐	☐	☐	☐
c.	Focus on core business	☐	☐	☐	☐	☐
d.	Improve the financial power of the company	☐	☐	☐	☐	☐

e.	Improve the rating	☐	☐	☐	☐	☐
f.	Discontinuation of lines of business after acquisitions of companies	☐	☐	☐	☐	☐
g	Solvency II / SST:					
-	Release of capital	☐	☐	☐	☐	☐
-	Optimisation diversification (smoothing)	☐	☐	☐	☐	☐
-	Cost reduction / disclosure obligations	☐	☐	☐	☐	☐
h.	Other: (please specify).....	☐	☐	☐	☐	☐

8. Which **methods** have you **already** used to actively reduce the run-off portfolio? (Please select an option for each point.) *0 = no experience, 4 = lots of experience*

		0	1	2	3	4
a.	Sale of the company with the run-off portfolio	☐	☐	☐	☐	☐
b.	Portfolio transfers	☐	☐	☐	☐	☐
c.	Retrospective reinsurance	☐	☐	☐	☐	☐
d.	Commutation	☐	☐	☐	☐	☐
e.	Scheme of arrangement	☐	☐	☐	☐	☐
f.	Other: (please specify).....	☐	☐	☐	☐	☐

C. Active run-off management

Example: Insurer A has withdrawn from the field of product liability for consumer goods and is no longer underwriting its new business. However, its obligations under existing policies and its technical provisions have not changed. To reduce this run-off portfolio, insurer A could transfer the portfolio to insurer B along with the covering assets. (See page 1 for various run-off methods.)

9. Does your company have business that is no longer underwritten (**run-off**) which it is actively reducing?

☐ Yes ☐ No

If yes, what percentage of the reserves is in **run-off** and is **actively being reduced**?.....%

10. To what extent (proportion of reserves) are there **run-off portfolios** for loss and accident insurance that are **actively being reduced** in your company? (Please rate each line of business.)

		0%-20%	20%-40%	40%-60%	60%-80%	80%-100%
a.	Vehicle insurance and motor liability	☐	☐	☐	☐	☐
b.	General liability	☐	☐	☐	☐	☐
c.	Accident	☐	☐	☐	☐	☐
d.	Legal protection	☐	☐	☐	☐	☐
e.	Transport	☐	☐	☐	☐	☐
f.	Other non-life insurance	☐	☐	☐	☐	☐
g.	Credit insurance	☐	☐	☐	☐	☐
h.	Other: (please specify).....	☐	☐	☐	☐	☐

11. In your opinion, what **reasons** could there be to **actively reduce** run-off portfolios (either through externalisation or internal measures)? (Please provide more information for each aspect.)
0 = unimportant, 4 = very important

		0	1	2	3	4
a.	Inter-group concentration of run-off portfolios	☐	☐	☐	☐	☐
b.	Uncertainty regarding future losses	☐	☐	☐	☐	☐
c.	Decreasing financial power of a business partner / stability of the reinsurer	☐	☐	☐	☐	☐
d.	Improved rating	☐	☐	☐	☐	☐
e.	Tax implications	☐	☐	☐	☐	☐
f.	Administrative costs	☐	☐	☐	☐	☐
g.	Preparation of M&A transactions	☐	☐	☐	☐	☐
h.	Solvency II / SST:					
-	Release of capital	☐	☐	☐	☐	☐
-	Optimisation diversification (smoothing)	☐	☐	☐	☐	☐
-	Cost reduction / disclosure obligations	☐	☐	☐	☐	☐
i.	Other: (please specify).....	☐	☐	☐	☐	☐

Example: Insurer A stops underwriting new policies in the field of product liability for consumer goods because this is not its core business. To improve its rating, the discontinued field of business (now in the run-off portfolio) has to be actively reduced. Externalisation is one possible solution.

12. If you consider an active approach prudent, **why** would you consider **externalising** the discontinued business (the run-off portfolio)? (Please provide more information for each aspect.) .....

0 = unimportant, 4 = very important

		0	1	2	3	4
a.	Reduce complexity	☐	☐	☐	☐	☐
b.	Shorten the run-off period	☐	☐	☐	☐	☐
c.	Release equity / strengthen financial position / short-term capital release	☐	☐	☐	☐	☐
d.	Improved rating	☐	☐	☐	☐	☐
e.	Direct reduction of costs	☐	☐	☐	☐	☐
f.	Lack of resources (staff, run-off expertise, time) to optimally manage the run-off portfolio	☐	☐	☐	☐	☐
g.	Focus on core business	☐	☐	☐	☐	☐
l.	Other: (please specify).....	☐	☐	☐	☐	☐

13. If you consider an active approach prudent, **why** would you **not** consider **externalising** the discontinued business (the run-off portfolio)? (Please provide more information for each aspect.)

..... *0 = unimportant, 4 = very important*

		0	1	2	3	4
a.	Mostly short-tail risks in the run-off portfolio	☐	☐	☐	☐	☐
b.	Realisation of potential run-off profits	☐	☐	☐	☐	☐
c.	Insufficient flexibility to adjust employee structures	☐	☐	☐	☐	☐
d.	Reputational risks for the company if the externalisation becomes known	☐	☐	☐	☐	☐
e.	Obstacles in the form of supervisory authorities	☐	☐	☐	☐	☐
f.	Increased requirements and attention from reinsurers	☐	☐	☐	☐	☐
g.	Increased attention from rating agencies and analysts	☐	☐	☐	☐	☐
h.	Protect ongoing customer relationships	☐	☐	☐	☐	☐
i.	Fiscal disadvantages	☐	☐	☐	☐	☐
j.	Incomplete data	☐	☐	☐	☐	☐
k.	Other: (please specify).....	☐	☐	☐	☐	☐

D. Implications of Solvency II / Swiss Solvency Test (SST) and outlook

Under Solvency II and the SST, run-off portfolios are accounted for through capital backing. Therefore, every company must take discontinued fields of business into account as part of its risk identification process and risk strategy.

14. In its risk identification process and risk strategy with regard to Solvency II and the SST, does your company take into consideration the following **run-off** risks? (Please provide more information for each aspect.)

0 = not accounted for, 4 = highly accounted for

		0	1	2	3	4
a.	Remeasurement of the portfolio of business that is no longer underwritten	☐	☐	☐	☐	☐
b.	Higher capital backing	☐	☐	☐	☐	☐
c.	Cause of transactions	☐	☐	☐	☐	☐
d.	Company not affected as run-off is its core business	☐	☐	☐	☐	☐
e.	Other: (please specify).....	☐	☐	☐	☐	☐

15. What **main drivers** do you think will influence the **run-off** activities of your company in the future? (Please provide more information for each aspect.) **.....***0 = no significance, 4 = major significance*

		0	1	2	3	4
a.	Complexity	☐	☐	☐	☐	☐
b.	Administrative costs	☐	☐	☐	☐	☐
c.	Operational excellence / value-driven management	☐	☐	☐	☐	☐
d.	Risk reduction	☐	☐	☐	☐	☐
e.	Transparency	☐	☐	☐	☐	☐
f.	Focus on core business	☐	☐	☐	☐	☐
g.	Solvency II / SST:					
-	Release of capital	☐	☐	☐	☐	☐
-	Optimisation diversification (smoothing)	☐	☐	☐	☐	☐
-	Cost reduction / disclosure obligations	☐	☐	☐	☐	☐
h.	Other: (please specify).....	☐	☐	☐	☐	☐

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