VESTTOO

Aggregate Stop Loss Deal

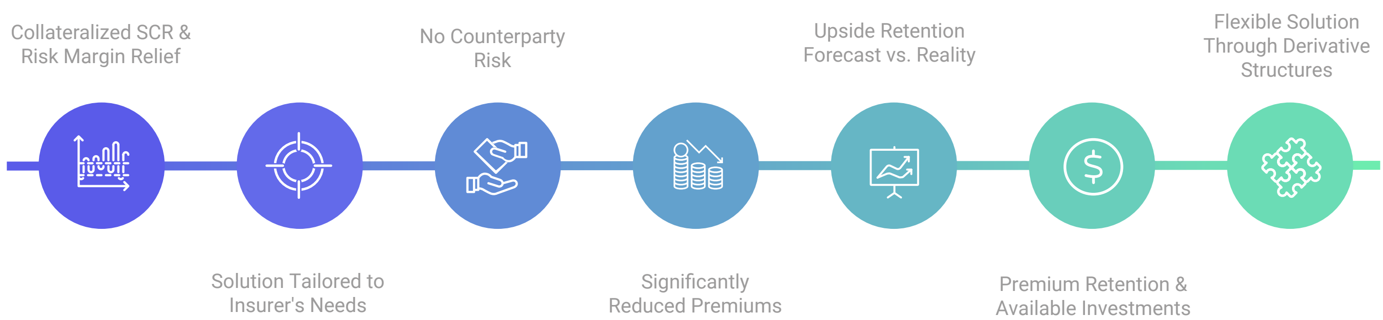
A Case Study

The CFO of a leading EU-based insurer (Moody´s rating A2 positive), reached out to **Vesttoo** to provide an affordable risk management solution. In the previous years, the insurer had an unexpected increase in capital requirements due to higher payments than expected on reserve claims, greatly elevating their risk and liability exposure. They had previously covered 70% of their risk with various reinsurance Quota Share deals with leading reinsurers and were searching for a solution for the retention. The insurer's balance sheet was already under stress due to multiple issues such as high Solvency II Capital Requirements (SCR), increasing regulatory limitations as well as the current low-interest environment and rising operation costs. The higher payments on reserve claims only intensified the need for capital relief.
Existing solutions the insurer's CFO explored were inefficient, complex and expensive, while the solution they needed had to be flexible, cost effective and quickly applicable to other risk types.

After learning all the limitations and needs of the insurer, Vesttoo's team suggested a custom-made Stop-Loss program that can be transferred as a derivative to capital market investors, enabled by Vesttoo's proprietary AI & machine learning-based risk models.

Our Customer's Challenges

- Immediate capital relief
- Efficient risk transfer
- Cost effective solution
- Accurate Best Estimate and risk calculations
- Flexible solution applicable to other risk types in the future
- One-stop-shop, customized solution



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Fully Customized **One-Stop-Shop** Solution

Vesttoo worked closely with the insurer's risk management and actuarial departments as well as the department of business intelligence, in order to accurately understand the insurer's needs and optimize the solution provided.

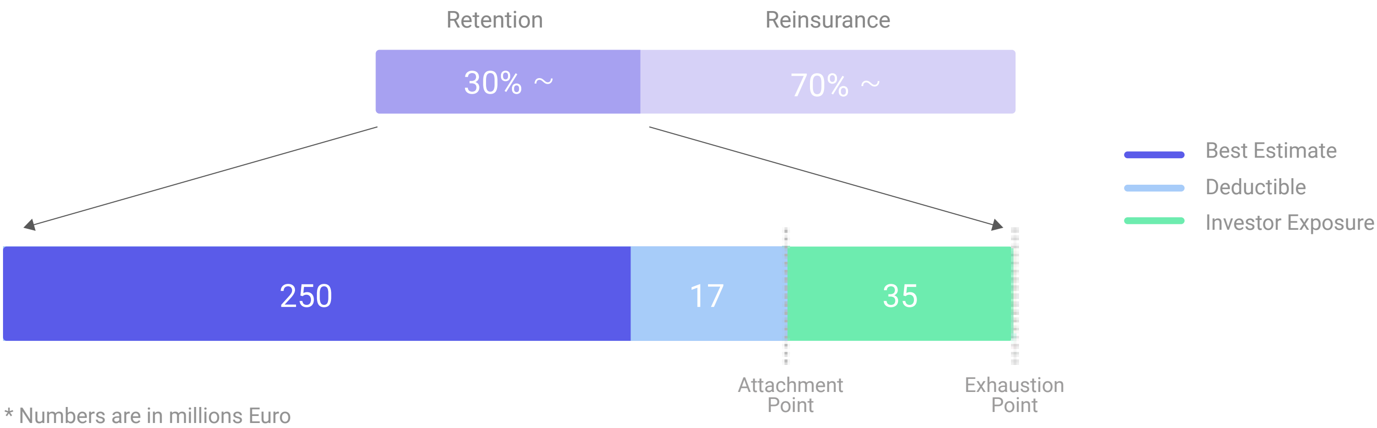
The solution was built over a specific list of claims from the insurer's portfolio - motor vehicles. Based on the insurer's claims, as well as the historical c Vesttoo recommended to use claim tranches based on specific years, 2010-2017, in order to optimize the capital relief.

Working on a pool of specific motor claims, **Vesttoo**'s team created an accurate risk profile, using proprietary stochastic risk algorithms, and used it to structure a derivative program. Furthermore, **Vesttoo**'s team collaborated with its deep investor network to optimize the derivative program in order for it to be attractive for all sides of the deal.

Creating a derivative program based on a specific tranch of claims is a new approach which was gladly adopted by the regulator as well as accounting and actuarial companies. Well respected firms such as EY were highly involved in constructing our capital transfer solution, ensuring data and risk model accuracy. **Vesttoo** worked closely with all parties involved - taking care of everything in the process.

Aggregate **Stop-loss** Deal

Transferring the risk of excess payments beyond a deductible, with the coverage capped at €35 million



* Numbers are in millions Euro

- Insurer liabilities were accounted for at €250 million
- Insurer takes excess losses up to €17 million
- Investors are accountable for the next €35 million

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The resulting deal was a tailor-made risk transfer program for the insurer's portfolio, in the form of a Stop Loss deal structured as an unfunded swap between cedents and investors, under ISDA guidelines. The deal was priced at an annual premium, with no upfront fees or frictional costs.

The deal was structured in a way that it could be easily applicable to other risk types in the future with minor alterations, or terminated early by the insurer (with no additional costs after five years), providing the speed and flexibility required.

Risk profiling using **Vesttoo**'s proprietary technologies ensured highly accurate calculations and efficient risk transfer from the insurer to the capital markets. The deal was successfully placed for investors to access within weeks, providing the capital relief the insurer needed at an affordable price.

Deal Specifics:

Product:	Closed block of Motor Liability Policies (2010-2017)
Risk Model:	Vesttoo independently modeled risks using bottom-up methodology on its AI platform
Currency:	Euro
Term:	7 years (flexible)
Premium:	Fixed annual premium of 2.25% of coverage, minimum annual premium - €250,000
Cash Flow:	Unfunded deal, no cash flow was transmitted at inception - everything was priced in the annual premium
Collaterals:	Deal lifetime: if actual payments are higher than the deductible, the investors pledge collaterals
Settlement:	At maturity, insurers receive compensation if actual payments exceed predetermined deductible (based on scheduled payment), up to a cap

Immediate **Solvency Relief** and Efficient **Risk Management** at a Fraction of the Cost

In summary, thanks to **Vesttoo**´s aggregate stop-loss deal, risk amounting to €35 Million was transferred to the capital markets, providing the insurer with €20 Million of capital relief. The deal was priced at 2.25% of the coverage.

Vesttoo's solution provided the insurer with fully-customized coverage for its excess payments, at a fraction of the cost, with no upfront payments or counterparty risk. The Insurer received the capital relief it needed and a flexible solution easily applicable to other risk types, improving the overall risk management.

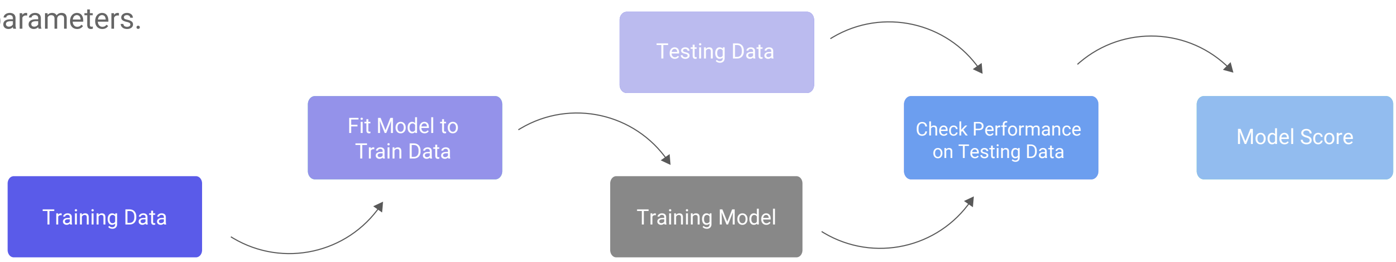
Vesttoo's cutting-edge technology suite brings the insurance industry and capital markets together, with no upfront costs

AI & Machine Learning Methodology

Vesttoo's methodology uses predictions based on cross-validation backtesting techniques, ensuring highly accurate modeling. This AI and machine learning approach uniquely handles the unusual behavior of divers liability sets. By applying its technology on each policy (bottom-up) the machine learning models create a robust forecast for best estimate, standard deviation and other risk parameters.

In addition, **Vesttoo**'s model provides liability sensitivity for every key economic factor by using stress testing of model risk and extreme events. This sensitivity vector is critical for optimization and for marketing the deal.

Our proprietary technology carries out thousands of tests, in which the system trains on a specific time period, creates a model and then applies it to another time period. The most accurate model is chosen out of the thousands carried out, radically increasing modeling accuracy:



About **Vesttoo**

Vesttoo has developed advanced technologies for data-driven risk management, translating actuarial risk to financial risk through the capital markets. **Vesttoo** specializes in risk modeling for alternative risk transfer for the P&C insurance and longevity markets, providing insurers with a low-cost strategic risk management solution for immediate capital relief.

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