# BENEFITS OF USING CAPTIVES TO INSURE GUARANTEES FOR NEW PRODUCTS

Nicholas Gurgone of Pinnacle Actuarial Resources outlines the virtues of insuring guarantees with a captive

Have you ever seen a new product or service and thought, "Great idea...but will it work?"

One of the keys to successful marketing is convincing potential consumers of a product's quality, efficacy, and utility. Might it make consumers more confident in a product if the company selling it was willing to put their money where their mouth was?

Businesses across industries work to instil confidence in their products by offering customers a warranty or guaranty. Doing so can be a valuable tactic for businesses with new products, to instil trust and provide a material competitive advantage. Captive insurance companies are playing a key role in this type of coverage.

Warranties and guarantees can be either automatically included or optional (e.g. extended warranties), with an optional, explicit premium to the customer or not. It's helpful to discuss the variations in turn.

Warranties and guaranties are similar, but not identical. Both are ways to guarantee your product or service to the buyer, and often the words are used synonymously. Technically, a guaranty is a formal assurance that certain conditions will be fulfilled, especially that a product or service will be of a specified quality.

A warranty is a guarantee promising to repair or replace a product, if necessary, within a specified period. A warranty is a specific type of guaranty. They effectively perform the same function, and the word choice primarily varies based on the industry, or whether a product or a service is being sold. Both can add value in similar ways. Because of the similarities, it is instructive to discuss them generally on a combined basis using the term warranty, unless there is a specific distinction to make. Another key difference is that warranties are typically regulated as insurance, while guaranties often are not.

Optional guaranties and warranties are purchased by the buyer, usually at the time of sale, for an extra cost. In a way, this is essentially like an insurance premium for the buyer, who has paid to transfer the risk of certain issues with the product back to the seller. Warranties or guaranties already included in the sale cost may appear free to the buyer, but it is likely that the seller has an estimate, formal or not, of the expected costs included in the total cost of the product. They're simply not visible.

The sophistication of products offered in the marketplace range from very formal insurance programmes with multiple options at varying prices, analytically determined, to informal options when a seller includes expected losses in the sale price, using a ballpark estimate based on past loss experience. Formalising the latter has the potential to add further value to the guarantor. Even in those less formal cases with less explicit premiums, there are opportunities to formalize premium estimates. Utilising captives to insure warranties and guarantees is one of those ways.

One of the key ways in which warranties can add value is by increasing customer or investor confidence in the product. If a consumer or potential capital contributor is sceptical about product viability, offering a warranty could alleviate some of the worry. The seller is communicating confidence, betting on the product and offering to make the consumer whole. In essence,


**Nicholas Gurgone**

**Nicholas Gurgone** is a consulting actuary with Pinnacle Actuarial Resources in Bloomington, Illinois. He holds a Bachelor of Science degree in actuarial science from Illinois State University and has worked in the property/casualty insurance industry since 2015. Gurgone has experience in assignments involving loss reserving, funding studies, loss cost projections, captive feasibility studies, commercial lines ratemaking and group captives.

they are agreeing to replace or refund if the product doesn't perform. A portion of the risk of the purchase is transferred from the consumer back to the seller. In this way, as noted above, it parallels a third-party insurance coverage.

Another value added from offering warranties is opening up additional revenue streams. Premiums taken in from selling optional warranties can potentially turn risk into profit, just as an insurance company aims to do. Selling coverage for a premium on top of a sale price might be ideal for a company, but many products and services already include warranties for competitive, legal or product confidence reasons.

Even when warranties are offered without an additional premium, a premium for the risk transfer is still buried in the product's price, whether or not it is formally determined or explicit. By formally calculating the expected cost of a guaranty (by a qualified actuary, for example), a business can maximise the efficiency (and profitability) of the guaranty programme in a number of ways.

First, they could more effectively determine the adequacy of the premium to cover losses. Doing so aids in making better costing decisions, such as increasing warranty price to more fully fund losses, or decreasing product price for a competitive advantage. Formalisation of the programme could also help maximise efficiency of holding reserves for future warranty losses. A company would, of course, want to hold enough in reserves so that there is money to pay out warranty losses when they occur, but also to release those reserves into profit as soon as reasonable. An actuary can help determine that sweet spot.

Even a simple warranty programme can add significant value to a seller. At a minimum, a warranty can increase confidence in the product or service. For a start-up, this confidence issue may be one of the most significant obstacles facing the company. In the fast paced world of tech start-ups, for example, revolutionary ideas with questionable viability aren't uncommon.

For a start-up, a company often needs to sell the idea/product to investors as well as consumers. Capital contributions, or a lack thereof, could make or break a start-up's future. The existence of a warranty, and the means to fund it via a formal and established warranty programme, may increase confidence an investor feels regarding a capital opportunity.

### The captive advantage

One way to formalise a warranty programme is to take the programme from something that looks like insurance into something that is unquestionably insurance. That can be done via a captive. A business can set up a captive insurance company that can sell its parent company insurance for their warranty risk. In this arrangement, the warranty would still be managed by and run through the parent company, but the parent would buy insurance from the captive to cover the parent's warranty losses, or some layer of them. Some percentage of the warranty revenues taken in by the parent are transferred over to the captive as premium. The premiums are then held as reserves within the captive until losses are paid out or the warranty expires, the premiums are earned and premium is recognised as income.

> "If a consumer or potential capital contributor is sceptical about product viability, offering a warranty could alleviate some of the worry"

By paying expected warranty losses (and captive overhead costs) as insurance premiums, the parent company could benefit from funding these costs up-front. In the time between premium payment and loss payment, up-front premiums are available as reserves for loss payments and accruing investment income. The end result is a more efficient method for a company to manage cash that needs to be held for future guaranty expenses regardless of its approach to risk financing.

The most straightforward example is a company that sold warranties for a certain price and then paid that full price to the captive as premium. However, that premium does not need to equal the warranty sale cost. Like all insurance companies, captive premiums are subject to insurance regulation and therefore they need to be actuarially reasonable. In some cases, warranties and guarantees sold directly to consumers can include profit loads or administrative expenses outside of the insurance company and included in addition to captive expected losses and expenses. In that particular situation, the captive premium would be less than the total warranty price.

As a result of the insurance regulation, the actuary determining the premiums for the captive will have the responsibility of ensuring that premiums are 'reasonable', or not inadequate or excessive. An actuary might determine, for example, that premium is equal to 80% of warranty sales, implying that the parent makes a 20% profit (less administrative expenses) on each sale. The 80% is paid to the captive, and the risk that the premium is not enough to fund losses is transferred from parent to captive.

That above example could alternatively lead the parent company to arrive at more competitive pricing for their products or their warranties. Rather than keeping prices level and accepting the 20% profit, the company may decide that reducing the price of the product by 10% may increase sales. Again, this could result in competitive advantage (if the actuarial study determined that reducing the price would still fully fund expected warranty losses).

Even warranties that are not sold with an explicit separate cost to consumers could be covered in that captive example. An actuary could calculate an appropriate premium rate using overall product sales as the exposure base. Another similar approach might include transferring liabilities of a group of outstanding warranties to a captive using a contractual liability insurance policy, or CLIP. In that instance, the parent would pay a premium to the captive based on the entire book of warranties, and would transfer the associated liability.

Captives offer several advantages to start-ups. A captive set up initially or primarily for warranties or guaranties can be set up relatively quickly and provide countless other useful coverages furthering company standing among potential investors and make them more likely to invest in a company well protected from liability exposures.

These are not necessarily new ideas. Just as many large companies operate their own captives to cover their property and casualty risks, some large companies oper-

ate their own captives to cover warranty expenses. Some large electronics retailers, for example, use captives to fund their entire product warranty programmes. The performance of extended warranty programmes, such as those offered by Best Buy, are also well documented. What is new, is to use these arrangements and strategies to the benefit of small and medium-sized businesses, or even start-ups.

At our firm, we've seen growing interest in these types of programmes, covering products in different types of markets. They may be warranties related to familiar, everyday products such as auto parts. Sometimes they are less common products and services that may have serious implications with respect to their performance, such as emergency generators at hospitals. Programs have been formed for companies offering all products in-between.

One particular example from the food and beverage industry is perishables. Increasingly, companies are selling various perishable items, ordered online and shipped to the customer's doorstep. One specific logistical risk is keeping perishable food items at appropriate temperatures throughout the shipping and delivery process. Some particular items, such as frozen seafood, gourmet cheeses and fresh produce for example, have a narrow range of temperatures that need to be maintained to ensure product quality. Because these products can be ruined at too warm or cool temperatures, they need to be kept within a temperature interval throughout the entire shipment. A company would do well to consider insuring product warranties through a captive to fund the logistical risk associated with shipping and delivering these products. This would also circumvent existing insurance products provided to logistical companies that could blame spoilage on poor packaging and deny any claims.

Another instructive example is a new company in the wellness industry selling products or services claiming to improve customer health. Since people are often sceptical of wellness claims, marketing a warranty or guarantee for the success of a product may convince a sceptic to give the product a try. With a captive set up to fund potential losses, the company can pay a portion of its revenue as premium to the captive and receive the benefits of holding this money as an insurance entity. Meanwhile, potential investors observe that the start-up is confident in their product, willing to bet company money on their success, and have a formalised process to pay for potential product failures.

The scope of such a captive programme doesn't necessarily have to be only forward-looking. An established company offering extended warranties for some time may have potential outstanding warranty liability looking back a number of years. The company may make a strategic decision to get those liabilities off their books. They could do so by forming a captive to write a tail policy insuring warranties currently in-force.

A captive also has an option to write coverage for warranties sold in the future in addition to the tail policy.

A helpful hypothetical is a company previously involved with recycling tires to use in place of mulch in a playground which offered a guarantee of increased safety over the market's alternative of woodchips. For whatever reason, the company might discontinue that product and no longer offer that warranty. If it wanted to transfer the company's exposure to the outstanding warranties, it could write a tail policy through a captive. It could then also use that captive to write ongoing new warranties for whatever other products or services they continued to sell.

The full possibilities for warranty programmes and captives are even broader than discussed in this article. Certainly, companies will continue to come up with creative and innovative ways to add value to their businesses using warranties. This is absolutely true in the start-up space, where creativity and innovation are often foundations of the start-up, and the value added by the warranty can be significant and come at a critical moment in the company's lifecycle. As knowledge of these possibilities spreads, growth in this market can be expected to continue. That's a guarantee that won't need a captive.