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THE INVENTORY AND PROFIT AND LOSS
COMPUTATION EXCLUSION—
PRACTICAL APPROACHES TO ISSUES RELATING
TO THE EXCLUSION

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I.
INTRODUCTION

Loss of inventory is a very common and widespread risk to many commercial businesses. Employers may learn of an employee's theft, terminate the employee and then attempt, after a passage of time, to indirectly establish the amount of that loss by showing an increase in the receipts from the particular part of the operations where the employee worked. Employers will then often assemble evidence based on inventory calculations, or profit and loss calculations, and projections to support their claims against the employee.

However, the rights of the employer under a fidelity bond are governed by the terms of the contract. Over time, the most commonly used fidelity forms have developed exclusions to limit or prohibit the introduction of proof of loss through inventory computations. These forms have recognized that inventory shrinkage, as shown in such calculations, can arise from any number of sources, some or all of which may or may not bear any direct relation by an employee.¹

¹ An encyclopedic overview of such scenarios appears in James E. Chelberg, *The Inventory Computation Exclusion—The Latest View*, 15 THE

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This article will review the history of coverage for such losses and the evolution of the inventory and profit and loss computation exclusion. It will also address common legal issues relating to the valuation of such losses. Next, this article will then review the prevalent accounting and investigation issues related to inventory and profit and loss claims. When confronted with inventory and profit and loss computation claims, the investigator should consider the evidence presented by the insured. Finally, this article will discuss common procedures and methods for determining the quantum of losses.

Claims arising from the alleged theft by employees of an insured's inventory give rise to a variety of legal, factual and accounting complications. The proper resolution of these claims can be facilitated by adopting a methodical approach to the analysis and investigation. Many of these steps will no doubt be second nature to experienced claims professionals. They bear reviewing, however.

First, there are two versions of the inventory and profit loss computations exclusion commonly used in modern fidelity forms, with a variety of modifications available by way of endorsement or proprietary forms. As with all claims, one must take care to determine the exact wording of the exclusion involved in the particular claim.

Second, even within the particular standard wording for such exclusions, published cases vary widely. Thus, the law of the particular jurisdiction involved should be carefully considered.

Third, as with all claims, open communication should be maintained with the insured as to the issues involved in the claim. To a higher degree than other varieties of fidelity claims, investigation and resolution of claims involving an alleged theft of inventory may involve field work relating to physical evidence including the physical inspection of the insured's premises, the alleged inventory classes in question, the security features at the facility in question, the insured's internal controls and inventory and bookkeeping systems. The need for this investigation should be carefully and thoroughly explained to the insured.

FORUM 930 (Summer 1980), cited in Ronald G. Mund & D.M. Studler, *The Inventory Computation and Profit Loss Exclusion: Separating the Wheat from the Chaff*, 7 FID. L.J. 165 (2001).

Fourth, consistent with this, it will often be appropriate to engage in what might be called “field work” to investigate the persons, methods and instrumentalities by which the claimed theft was thought to be perpetrated. This may be accomplished by in-house claim personnel or outside accountants and legal professionals.

Fifth, from this investigation and analysis, it will be necessary to develop sufficient facts and to determine whether, from a factual and accounting viewpoint, the fact and the amount of the loss allegedly directly resulting from employee theft makes logical sense or if some other explanation seems more appropriate.

Finally, if computational evidence is appropriate and permitted, such evidence must be reviewed to determine what quantum of loss is sensible and appropriate under the facts of the claim and the coverage purchased by the insured.

Investigations of claims involving the loss of inventory are necessarily fact intensive and will often require significant field work involving physical evidence. This will, in appropriate cases, involve inspection and review of the physical facilities at issue in a particular claim, the physical location and accessibility of the inventory in question and other practicalities involved in the claim. For example, if the inventory in question is of a volume and weight such that it could only be moved in the quantities in question by way of truck, investigation will need to be conducted to determine if the extent to which such methods of theft are feasible. Likewise, if the items of inventory in question are particularly small and valuable, the security measures and protocols in place at a particular facility will be especially relevant. They will manifest themselves as the facts of the particular claim become known. Fidelity claims are frequently document and witness intensive insurance claims. Claims involving an alleged loss of inventory add a third element, physical evidence and the physical facilities in question. A thorough understanding of all three aspects of the factual components of the claim will help bring it to an appropriate resolution.

II. HISTORY OF FIDELITY INSURANCE FORMS

Early common fidelity insurance forms provided coverage for fidelity losses, “including that part of any inventory shortage which the insured shall conclusively prove to have been caused by fraud or dishonesty of any Employees”² In the face of increasingly broad construction of this clause diluting the term “conclusively” to that of a preponderance of the evidence, in 1957 the Surety Association of America³ revised the inventory exclusion to provide that it excluded:

[L]oss, or that part of any loss, as the case may be, proof of which as to its amount, is dependent upon an inventory computation or a profit and loss computation; provided, however, that this paragraph shall not apply to the loss of money, securities, or other property which the insured can prove, through evidence wholly apart from such computations, was sustained by the insured through any fraudulent or dishonest act or acts committed by any one or more of its Employees.⁴

A split of authority arose over the construction of this clause. As will be discussed in more length below, some reported decisions held the exclusion eliminated the use of computations unless other evidence wholly apart from those computations verified the nature and the extent of the loss. A second line of authority concluded that computations would be allowed as long as there was at least some independent evidence of the nature and extent of the loss.⁵

This provision remained in effect in common forms until 1977 when the term “provided” was deleted. In an effort to resolve the split of authority, in 1977 the exclusion was revised to exclude “loss, or that part of any loss as the case may be, the proof of which either as to its factual

² ANNOTATED COMMERCIAL CRIME POLICY 268 (Cole S. Kain & Lana M. Glovac eds., 2d ed. 2006).

³ The Surety Association of America is now known as the Surety and Fidelity Association of America. Hereinafter SFAA.

⁴ ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, at 268.

⁵ *Id.*

existence or to its amount, is dependent upon an inventory computation or a profit and loss computation.”⁶ The industry modified the structure of the clause in 1986 though the language was left substantially the same.

A 1986 provision provided, in pertinent part:

1. Additional Exclusions: We will not pay for loss as specified below:
 - b. Inventory Shortages: loss of that part or any loss, the proof as to its existence or amount is dependent upon:
 - (1) An inventory computation; or
 - (2) A profit and loss computation.⁷

The turn of the millennium saw a new look for the ISO and SAA coverage forms. The SAA coverage form CR 00 01 10 90 Form A, Employee Dishonesty Coverage Form, was combined with general provision Form CR 11 00 (along with a number of other forms) to create a single commercial crime policy.⁸ Exclusions for the particular form were included within that form, and the inventory and profit and loss exclusion was included within the form for employee dishonesty coverage.⁹

The ISO form was revised in 2000. The revised form also included an exclusion for inventory and profit and loss calculations.

The ISO exclusion language diverged from the SAA form. In pertinent part, the SAA form, CR 00 01 10 90, provided that it excluded:

- b. **Inventory Shortages:** loss, or that part of any loss, the proof of which as to its existence or amount is dependant upon:

⁶ *Id.* at 269.

⁷ *Id.* at 269.

⁸ *Id.*

⁹ *Id.*

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- (1) An inventory computation; or
 - (2) A profit and loss computation.¹⁰

In contrast, the ISO form, CR 00 23 07 02, provides that it excludes:

- 2. Insuring Agreement **A.1.** does not apply to:

....

- b. Inventory Shortages**

Loss, or that part of any loss, proof of which as to its existence or amount is dependent upon:

- (1) An inventory computation; or
- (2) A profit and loss computation.

However, where you establish wholly apart from such computations that you have sustained a loss, then you may offer your inventory records and actual physical account of inventory to support the amount of loss claimed.¹¹

Thus, the ISO form expressly allows the use of inventory comparison computation in some situations where the insured establishes, wholly apart from such computation, that it has suffered such a loss, whereas the SAA form does not contain such provision.

¹⁰ Employee Dishonesty Coverage SAA Form CR 00 01 10 90 (October 1990) [hereinafter SAA Form CR 00 01 10 90], Additional Exclusions, Conditions and Definitions, D.1.b, *reprinted in* ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, at 729 (bold in original).

¹¹ Commercial Crime Policy (Loss Sustained Form) CR 00 23 07 02 (July 2002) [hereinafter ISO Form CR 00 23 07 02], Exclusion D.2.b, *reprinted in* ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, at 699.

However, both forms retain the prohibition against the use of profit and loss computations.

Policy provisions and case law surrounding these terms have developed into three distinct categories:¹²

1. Exclusions and case law relating to provisions requiring that the insured prove by “conclusive” evidence that the loss was directly caused by employee dishonesty;¹³

2. Exclusions precluding use of inventory of profit and loss computations except where the insured can prove wholly and independently from the inventory computation that the inventory shortage was sustained directly from fraudulent or dishonest acts by an employee;¹⁴ and

3. Exclusion of losses dependent upon proof as to either their existence or amount upon either an inventory computation or a profit and loss computation.¹⁵

III. CONCLUSIVE PROOF STANDARD

As noted above, early fidelity coverages provided coverage for losses “including that part of any inventory shortage which the insured shall conclusively prove to have been caused by fraud or dishonesty of any employees.” This provision began the development of what became an exclusion by requiring a higher level of proof for coverage of inventory losses. This provision tacitly recognized that the myriad of factors that can give rise to lost inventory are related to employee dishonesty. Ordinary shrinkage was not and is not the type of risk covered under most common fidelity coverages.

¹² Mund & Studler, *supra* note 1, at 166.

¹³ Commonly referred to as the conclusive proof standard.

¹⁴ Commonly referred to as the exclusion with exception line of cases.

¹⁵ Commonly referred to as the absolute exclusion. Mund & Studler, *supra* note 1, at 166.

A comprehensive review of the many published decisions reviewing these early forms is beyond the scope of this paper. However, a brief overview is in order for historical perspective.

Hartford Accident & Indemnity Co. v. Hattiesburg Hardware Stores, Inc.,¹⁶ is typical of these opinions and provides a helpful example of the importance of good field work. The court reviewed coverage for shortages of certain items, including butane tanks from a hardware store. The policy in question contained a provision requiring the insured to “conclusively prove” that such claimed inventory shortage was caused by the dishonesty of any employee. The court found that there was sufficient evidence to submit certain items to the jury, but that because there was no connection between the employee and the disappearance of certain inventory of butane and butane tanks, such items were not properly recoverable under the policy.¹⁷

The court’s analysis of the portion of the claim relating to butane tanks reveals an interesting and important lesson to be learned; that is, whether the alleged proposed theft makes sense in light of the methods used and resources available to the alleged defalcating employee. The court reviewed the size of the tanks, the logistical difficulties of a theft of the scale posited by the insured, and the lack of security and other controls. Based upon these practical considerations, the court held the exclusion barred recovery for the lost tanks:

The testimony shows that the tanks kept on hand for sale were stored on a vacant lot in the City of Hattiesburg, but the lot was not enclosed by a wire fence or in any other manner, and that the company provided no guard or night watchman to keep watch. Testimony shows that the smallest tanks carried in stock weighed 450 or 500 pounds, and that three men were required to load one into a truck. Testimony shows that after Barnett had been discharged, the company erected a fence around the lot on which the tanks were stored. Testimony shows that no inventory was made of the tanks on the yard at the time Barnett was employed. An inventory was made

¹⁶ 49 So. 2d 813 (Miss. 1951).

¹⁷ *Id.* at 822-23.

sometime thereafter. There is no testimony in the record which connects Barnett in any way with the disappearance of the 25 tanks that were unaccounted for.¹⁸

Clearly, the lack of security and the difficulty in loading the tanks were practical factors considered by the court in denying recovery for those items. While this reported decision relates to language no longer used by the industry, the court's analysis provides a helpful example of the importance of developing facts to demonstrate the day to day operations of the insured's business, the method of the alleged theft, and the feasibility or difficulty of a loss occurring in a particular matter.

Similar detailed factual analysis can be gleaned from reviewing other reported decisions reviewing claims under this provision.¹⁹ They teach one lesson in particular that is of use to us today—there is no substitute for good field work in reaching a proper resolution of a claim involving allegedly stolen inventory.

IV. DEVELOPMENT OF THE “EXCLUSION WITH AN EXCEPTION” STANDARD

As discussed above, divergent case law emerged as to the application of the insuring language requiring that the insured establish conclusively that employee dishonesty was the cause of a loss of inventory. Many cases diluted the meaning of the provision to allow the establishment of such losses by a mere preponderance of evidence, without regard to the policy language. Accordingly, in 1957, the SAA promulgated the inventory computation exclusion, which excluded:

¹⁸ *Id.* at 823.

¹⁹ *Sucher Packing Co. v. Manufacturers Cas. Ins. Co.*, 245 F.2d 513 (6th Cir. 1957); *Leader Clothing Co. v. Fid. & Cas. Co. of N. Y.*, 237 F.2d 7 (10th Cir. 1956); *Cobb v. Am. Bonding Co. of Baltimore*, 118 F.2d 643 (5th Cir. 1941); *Gaytime Frock Co. v. Liberty Mut. Ins. Co.*, 148 F.2d 694 (7th Cir. 1945) (enforcing the exclusion); *but see New Amsterdam Cas. Co. v. W. D. Felder & Co.*, 214 F.2d 825 (5th Cir. 1954); *Nat'l Shirt & Hat Shops of Carolinas v. Am. Motorists Ins. Co.*, 68 S.E.2d 824 (N.C. 1952) (finding the exclusion inapplicable on the particular facts before the court).

[L]oss, or that part of any loss, as the case may be, the proof of which, either as to its factual existence or as to its amount, is dependent upon an inventory computation or profit and loss computation; provided however, this paragraph shall not apply to loss of Money, Securities or other property which the insured can prove, through evidence wholly apart from such computation, is sustained by the insured through any fraudulent or dishonest acts or acts committed by any one or more of the Employees.²⁰

The purpose of this exclusion was:

- (1) to provide coverage only for such losses that are definitely due to dishonesty;
- (2) to state clearly that there is no coverage for any loss based on inventory computations or on profit and loss computations;
- (3) to rule out a determination of an amount of loss by use of such computations; and
- (4) to establish in advance the fact that coverage applies only to that part of any loss proven to be caused by employee dishonesty.²¹

This language has developed through the years to that used in the modern ISO form, Form CR 00 23 07 02. To recap, this language excludes:

Loss, or that part of any loss, proof of which as to its existence or amount is dependent upon:

- (1) An inventory computation; or
- (2) A profit and loss computation.

²⁰ ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, at 268.

²¹ *Id.*

However, where you establish wholly apart from such computations that you have sustained a loss, then you may offer your inventory records and actual physical account of inventory to support the amount of loss claimed.²²

In *Gillette Co. v. Travelers Indemnity Co.*,²³ the Seventh Circuit enforced the exclusion as written:

We agree with the conclusion of District Court on this issue, but think there is nothing to be gained by an extended discussion of it. This is so because assuming that plaintiff's proof of loss was 'wholly apart from such computation', it was incumbent upon it to submit evidence which reasonably proved that such loss was in fact due to the dishonesty of one or more of its employees²⁴

The court explained that "the most charitable appraisal of which plaintiff's proof on this point is acceptable is that it creates a healthy suspicion that plaintiff's employees were engaged in stealing razor blades"²⁵ Gillette argued that the provision was illusory because the only way to prove a loss would be to catch the employee red-handed. The court considered this argument and reasoned:

While we have some sympathy for this argument, we think it must be rejected in view of the plain, unambiguous language of the policy. It expressly renders the policy inapplicable where proof of the loss or any part thereof is dependant upon and inventory computation. Told that this specific language should be interpreted to mean something other than that plainly

²² ISO Form CR 00 23 07 02, *supra* note 11, Exclusion D.2.b.

²³ 365 F.2d 7 (7th Cir. 1966).

²⁴ *Id.* at 9.

²⁵ *Id.* at 10.

stated, would constitute an infringement of the right of the parties to write their own contract.²⁶

This article will now turn to the wide variety of reported decisions have reviewed this provision and its successors.

A. *When is a negative inference from circumstantial evidence sufficient?*

A number of reported decisions have considered the extent to which a claim can be established by showing the lack of a logical explanation other than the involvement of dishonest employees to create a negative inference that employees perpetrated the theft.

A split of authority exists on this issue.

In *Dunlop Tire & Rubber Co. v. Fidelity & Deposit Co. of Maryland*,²⁷ the Second Circuit reviewed the district court's dismissal of the insured's claim. The loss was of various sporting goods from a locked area within a warehouse. The evidence consisted of inventory records, the accuracy of which were not challenged.²⁸ The facts also revealed that the items were in a portion of the warehouse which was locked, and that only three or four employees had keys, all of which were turned in to the sporting goods manager at night. No Dunlop employees remained on the premises at night. Additionally, the secure area was monitored by an alarm, and no break-ins were reported to the alarm company during the time in question, nor did anyone notice any physical evidence of burglary. Moreover, after the loss was discovered, there was turnover in the warehouse and no shortages had taken place since then.²⁹

The Second Circuit affirmed the judgment of the trial court, holding that there was a complete absence of proof of employee dishonesty independent of the inventory computation. It stated:

²⁶ *Id.* at 8-9.

²⁷ 479 F.2d 1243 (2d Cir. 1973).

²⁸ *Id.* at 1244.

²⁹ *Id.* at 1245.

In support of its allegations, that it suffered a loss due to employee dishonesty, Dunlop has attempted to prove that only its employees could have taken the lost goods. It has produced evidence to show that the lost property was separately stored and locked in a warehouse occupied only by it; that most of the articles were stored in a separately locked floor to ceiling cage; that non-employees were not permitted access; that a burglar system was operational; that there was no physical evidence of burglary; and that since the turnover of employees following the discovery of the loss, no similar losses have occurred.

This is circumstantial evidence that, if a loss in fact was sustained, Dunlop employees would be perpetrators. But this so-called evidence of employee dishonesty presupposes the factual existence of the loss. The evidence merely tends to foreclose the possibility of theft by persons other than employees. It does not prove the existence of any loss. There are no confessions, actual or implied, from employees who had been stealing goods. Dunlop has not shown suspicious circumstances showing employees were pilfering goods. The only evidence that a loss occurred at all is in the inventory computations. Such computations alone are insufficient to prove the existence of the loss in light of the prohibition of the inventory exclusion clause.³⁰

Thus, the Second Circuit held that the negative inference to be drawn from the evidence tending to illuminate possible thieves other than employees was not sufficient to link the inventory shortage to dishonesty by an employee.

Other cases have adopted a contrary position. In a case involving the application of California law, *General Accident, Fire & Life Assurance Co. v. Independent Military Air Transport Ass'n*,³¹ the

³⁰ *Id.* at 1247 (footnote omitted).

³¹ 232 F.2d 439, 443 (9th Cir. 1956). *Accord* Savannah Wholesale Co. v. Cont'l Cas. Co., 279 F.2d 706, 708 (5th Cir. 1960).

quintessential “lockbox” case, the insured was an air transport company dealing specifically with “leave” travel for military personnel. During a rather busy weekend, the insured received \$15,000 in cash. This money was put in a lockbox and placed in a locked desk drawer in the manager’s office at the insured’s location. Supposedly, the manager of the operation had the only keys to the desk, while the ticket seller, who assisted the manager, had the only key available to the cashbox.³²

The next day the box was found where it had been, locked inside a desk. Upon opening, the currency was missing. The insured made a claim under its employee bond, which was denied for lack of direct evidence of employee dishonesty. At trial, the jury found in favor of the insured, ruling that no other hypothesis was as reasonable as employee dishonesty.

The two lines of authority can be reconciled to some extent. Decisions such as *Dunlop Tire* tend to involve large volumes of inventory, with little or no direct evidence of a loss directly caused by employee dishonesty. On the other hand, the “lockbox” cases tend to involve observations of property that could be characterized as an enumeration rather than an inventory computation and thus not violative of the exclusion. To the extent that they cannot be harmonized, the *Dunlop Tire* line of authority more closely hews to the wording of the exclusion.

B. Is an employee’s confession sufficient to allow the use of inventory computations in policies which contain the proviso?

A number of decisions have considered when confessions will be deemed sufficient to satisfy the “proviso” of many common inventory exclusions which allow such evidence as to “loss of money, securities or other property which the insured can prove, through evidence wholly apart from such computation, enumeration or comparison, if sustained by

³² *Gen. Acc. Fire & Life Assur. Corp.*, 232 F.2d at 443.

the insured through any fraudulent or dishonest acts . . . committed by one or more of the employees.”³³

For example, in *Prager & Bear, Inc. v. Federal Insurance Co.*,³⁴ the California Court of Appeals affirmed the judgment of the trial court sitting without a jury. In this case, the owners of the business began noticing discrepancies between perpetual inventory records and an actual count. They terminated an employee and installed security measures, including burglar alarms, bars and special locks. An additional shortage was discovered, but no direct evidence of employee involvement was found and so the claim was denied. Approximately one year later, the insured discovered additional losses and obtained a confession from the employee from this latter period, but not the former period. The insured asserted that it had established a covered loss for both periods.³⁵ The Court of Appeals affirmed the judgment of the trial court allowing recovery for the latter period for which the insured had obtained a confession, but denying recovery for the former period. As stated by the Court of Appeals:

In the case before us, for purposes of argument, we may assume that there was substantial evidence of employee dishonesty prior to October 1970 and during the period after June 1971. However, we are not here concerned with such losses since there was no fidelity bond when the first losses occurred and because plaintiff was paid by defendant for the loss which occurred during the latter period. We are concerned solely with the losses that occurred between October 1970 and June 1971 and whether, as to those losses, there was any independent evidence of employee dishonesty or evidence tending to connect such losses with the prior or subsequent losses. The trial court found that there was not, and we have concluded, that its finding must be upheld.³⁶

³³ *Prager & Bear, Inc. v. Fed. Ins. Co.*, 136 Cal. Rptr. 340 (Ct. App. 1977).

³⁴ *Id.*

³⁵ *Id.* at 342.

³⁶ *Id.* at 344 (footnote omitted).

The court went on to conclude that the exclusion was unambiguous.³⁷

Other reported decisions have used a similar analysis to reach similar conclusions.³⁸ In *Kentuckiana Sales, Inc. v. Security Insurance Co.*,³⁹ the insured submitted the principal's admission to a conviction for theft of specifically identified inventory. The court held that the confession and conviction were not admissible evidence wholly and apart from the inventory computation to permit introduction of the inventory computation. The court rejected the admission of the evidence as being inadmissible hearsay.

On the other hand, other decisions admit confessions and find that they satisfy the forms using language similar to that at issue in *Prager & Bear*.⁴⁰ In *Tri Motor Sales, Inc. v. Travelers Indemnity Co.*,⁴¹ the insured submitted a claim for the alleged theft of inventory by one of its employees. As in *Prager & Bear*, the principal confessed to stealing parts and accessories during one period of the time in which the insured claimed he had been stealing but not the balance. The exclusion in question allowed the use of inventory computations where the insured established that "through evidence wholly apart from such computations, [the loss] is sustained by the insured through any fraudulent or dishonest act or acts committed by one or more of the Employees"⁴² The court concluded:

³⁷ *Id.* at 345.

³⁸ *See, e.g.,* *Lumbermen's Mut. Cas. Co. v. Norris Grain Co.*, 343 F.2d 670, 691 (8th Cir. 1965); *Popeo v. Liberty Mut. Ins. Co.*, 343 N.E.2d 417, 420 (Mass. 1976); *Ace Wire & Cable Co., Inc. v. Aetna Cas. & Sur. Co.*, 457 N.E.2d 761 (N.Y. 1983); *Strings & Things in Memphis, Inc. v. State Auto Ins. Companies*, 920 S.W.2d 652, 654 (Tenn. Ct. App. 1995).

³⁹ 394 S.W.2d 744 (Ky. 1965).

⁴⁰ *See, e.g., Prager & Bear, Inc.*, 136 Cal. Rptr. at 341; *Atlanta Coca-Cola Bottling Co. v. Transamerica Ins. Co.*, 61 F.R.D. 120, 122 (N.D. Ga. 1973); *Sommer v. Gen. Ins. Co. of Am.*, 259 N.E.2d 142, 155 (Ohio Ct. App. 1970); *Tri-Motors Sales, Inc. v. Travelers Indem. Co.*, 119 N.W.2d 327, 331 (Wis. 1963).

⁴¹ 119 N.W.2d 327.

⁴² *Id.* at 331.

Except for the thefts admitted by Woodward during the six months of his employment, plaintiff has not proved ‘wholly in part from such [inventory] computations’ the fact of any loss of property ‘through any fraudulent or dishonest act or acts committed by one or more of the employees’ as it is required to do under sec. 2(b) of the Exclusions of the Policy. Neither Woodward’s admitted thefts nor proof comprised of inventory computations is sufficient basis for establishing the fact of further recoverable losses on the Policy due to acts of other employees.⁴³

The courts have often shown a willingness to accept employee confessions in claims against the fidelity insurer both as to the existence and the amount of the loss.⁴⁴ In *G.M. McKelvey of America*,⁴⁵ the court observed that a person who embezzles has the peculiar means of knowing how much was taken and is in fact the only person who can accurately indicate both the fact and the amount of the embezzlement.⁴⁶ Similarly, the opinion in *Alexander Grant’s Sons v. Phoenix Insurance Co.*⁴⁷ explains the rationale for allowing such confessions against fidelity insurers as follows:

It might be noted that, if such proof is not to be admitted, it is difficult to see how an employer would be able to recover on an employee’s fidelity bond in most instances. Employee misappropriation usually is committed in secret; admissions of guilt are generally

⁴³ *Id.* at 334.

⁴⁴ *See, e.g.*, *Trade Dev. Bank v. Cont’l Ins. Co.*, 469 F.2d 35 (2d Cir. 1972); *Oscar Gruss & Son v. Lumbermens Mut. Cas. Co.*, 422 F.2d 1278 (2d Cir. 1970); *Lumbermens Mut. Cas. Co. v. Renuart-Bailey-Cheely Lumber & Supply Co.*, 387 F.2d 423 (5th Cir. 1968) *modified*, 392 F.2d 556 (5th Cir. 1968); *Am. Mut. Liab. Ins. Co. v. Thomas & Howard Co.*, 228 F.2d 550 (4th Cir. 1955); *Letendre v. Hartford Acc. & Indem. Co.*, 236 N.E.2d 467 (N.Y. 1968); *Alexander Grant’s Sons v. Phoenix Assur. Co.*, 267 N.Y.S.2d 220 (App. Div. 1966); *G. M. McKelvey Co. v. Gen. Cas. Co. of Am.*, 142 N.E.2d 854 (Ohio 1957).

⁴⁵ 142 N.E.2d 854.

⁴⁶ *Id.* at 856.

⁴⁷ 267 N.Y.S.2d 220.

made, not at the time of defalcation, but at a time of subsequent investigation and apprehension. As defendant's policy provides, the insurer may specifically prohibit proof of loss by use of inventory or profit and loss computations. Without an eye witness, nothing is left to the employer by which he may secure the benefit which he has purchased in a policy of indemnification.⁴⁸

Several practical lessons may be gleaned from these opinions. First, many jurisdictions will accept the confession of an employee in support of a proof of loss for a claim under a fidelity policy. Second, those courts that allow the admission of such evidence examine the scope and timing of the confession and at least consider the scope and timing of the confession when determining whether or not to accept some or all of an inventory computation to corroborate the amount of the loss. Third, an insurer still may rely upon the practical constraints of the loss and the amounts that could conceivably have been caused by the act of employee dishonesty to which the employee confessed. Fourth, the circumstances under which the confession was extracted may be examined as well. Finally, a confession must be analyzed to consider questions of bias, competency and foundation.

C. *What is the impact of evidence of employees being caught in the act of stealing?*

A common factual pattern arises when an insured catches an employee "red handed" stealing inventory. The insured thereafter performs an inventory computation for the entire relevant period and includes the entire amount of the shortage in its claim.

The reported case law reaches divergent results in decisions based on these general facts. The cases which reach the most appropriate conclusions tend to have the most detailed factual development. These facts reveal the extent to which the claimed losses do, or do not, make sense logically, and which have a sufficiently logical causal nexus between the alleged principal's act and the claimed loss.

⁴⁸ *Id.* at 224. *Accord Letendre*, 236 N.E.2d at 469.

For example, in *United States Smelting Refining & Mining Co. v. Aetna Casualty & Surety Co.*,⁴⁹ the insured submitted one item of direct evidence of employee dishonesty. An employee, Harry Jones, had been caught in the act of having one silver bar in his possession.⁵⁰ The court found that this one act was insufficient to allow the insured to recover under the employee dishonesty coverage in the face of an inventory exclusion which would have otherwise allowed the use of inventory computations to corroborate the amount of the loss.⁵¹ Interestingly, however, the policy in question was a comprehensive dishonesty, disappearance and destruction policy, and the court found that indemnity could lie under the “disappearance” coverage. Thus, as far as the employee dishonesty coverage in the bond at issue, the court required a showing of a causal relationship between the alleged dishonesty and the amounts claimed.⁵²

In *Harris W. Hall Co. v. Security Insurance Co.*,⁵³ a colleague of the alleged principal witnessed another employee, Alfred Dorest, take out boxes of merchandise that had been loaded on the truck but not logged in as being loaded or as being sold. This same employee also witnessed Dorest receiving money. Dorest was arrested shortly thereafter in the act of receiving \$600 in cash for stolen merchandise.⁵⁴ The bond in question contained an exclusion of inventory computation evidence which contained a proviso stating that “this paragraph shall not apply to loss of money or property which the insured can prove, through evidence wholly apart from such computations, is sustained by the insured through any fraudulent or dishonest act or acts committed by one or more of the Employees.”⁵⁵

⁴⁹ 372 F. Supp. 489 (S.D.N.Y. 1974).

⁵⁰ The insured was in the business of reclaiming silver and gold from scrap.

⁵¹ *Id.* at 494.

⁵² *Id.* at 493. *Accord* *Teviro Casuals, Inc. v. Am. Home Assur. Co.*, 439 N.Y.S.2d 145 (N.Y. App. Div. 1981) *aff’d sub nom.* *Teviro Casuals Inc. v. Am. Home Assurance Co.*, 429 N.E.2d 830 (N.Y. 1981); *Danal Jewelry Co. v. Fireman’s Fund Ins. Co.*, 264 A.2d 320 (R.I. 1970).

⁵³ So. 2d 832 (La. Ct. App. 1974).

⁵⁴ *Id.* at 833.

⁵⁵ *Id.*

Dorest's co-worker, Henderson, testified that he viewed the activity taking place on a regular basis. The insured introduced evidence of the amount of shortage in the form of inventory calculations. It claimed a shortage of \$23,035.71. On relatively little evidentiary threats of Dorest to the loss, the trial court in a judgment against the defendant to the bond's limits, \$10,000.00.⁵⁶

D. Alteration or destruction of records

Alteration or destruction of records is often taken as independent evidence of knowledge of guilt sufficient to satisfy the proviso's requirement of evidence independent of inventory computations to establish the existence of an employee dishonesty loss of inventory. For example, in *Fort Smith Tobacco & Candy Co. v. American Guaranty & Liability Insurance Co.*⁵⁷ the employee admitted having "borrowed" cash from the till but claimed he had repaid it and the court did not dispute this contention. However, the employee admitted to altering the inventory to make the inventory count balance.⁵⁸ He, apparently, argued that this was due to inadvertence on his part and a subsequent effort to cover up his negligence, but not his dishonesty.⁵⁹ The court found the totality of evidence sufficient to allow the admission of inventory computations for the period covered by the alteration in the records, but not the entirety of the missing inventory.⁶⁰ As noted above, destruction of records is also seen as a corroborating factor.

⁵⁶ *Id.* at 834. *Accord* Gulf Enterprises, Inc. v. Maryland Cas. Co., 267 So. 2d 733, 734-35 (La. Ct. App. 1972) *writ denied sub nom.* Gulf Enterprises, Inc. v. Maryland Cas. Co., 271 So. 2d 532 (La. 1973); Tri-Motors Sales, Inc. v. Travelers Indem. Co., 119 N.W.2d 327, 329 (Wis. 1963).

⁵⁷ 208 F. Supp. 244 (W.D. Ark. 1962).

⁵⁸ *Id.* at 255.

⁵⁹ *Id.*

⁶⁰ *Id.* *Accord* Nat'l Shirt & Hat Shops of Carolinas v. Am. Motorists Ins. Co., 68 S.E.2d 825 (N.C. 1952).

E. What impact do arguments regarding the insureds' "reasonable expectations" and alleged ambiguity of the policy have on a claim?

A number of decisions have reviewed the exclusion to determine if it, and the analysis offered by the insurer, is in accord with the insured's reasonable expectations. For example, in *Hoboken Camera Center, Inc. v. Hartford Accident & Indemnity Co.*,⁶¹ the Court of Appeals reviewed the grant of summary judgment in favor of Hartford based upon a stipulation of facts as follows: (1) on one occasion an employee shorted a bank deposit, (2) on another occasion two cameras were seen in a locked case, but were missing in the morning, (3) on one occasion an employee told another employee that he had taken money from the cash register to pay wages to a third employee, even though wages were paid by check at that time, and (4) inventory control evidence would establish a shortage of inventory in the amount of \$42,705.22.⁶²

The court of appeals reversed, holding that to construe the exclusion otherwise would be to render the policy "practically valueless" for an insured's exposure to theft of inventory.⁶³ At least one other decision has reached a similar result holding the exclusion to be ambiguous.⁶⁴ It should be noted that at least two other reported decisions have held the inventory exclusion to be unambiguous.⁶⁵

A frequent question arising in the context of claims impacted by the inventory exclusion is whether or not the evidence proffered is not an inventory computation, but rather a counting or enumeration. For example, if an automobile dealership had five automobiles on the showroom floor at the close of business and, on return to work the next

⁶¹ 226 A.2d 439 (N.J. Super. Ct. App. Div. 1967).

⁶² *Id.* at 442.

⁶³ *Id.* at 444, *citing* Reese Cadillac Corp. v. Glens Falls Ins. Co., 157 A.2d 331 (N.J. Super. Ct. App. Div. 1960).

⁶⁴ Tri-Motors Sales, Inc. v. Travelers Indem. Co., 119 N.W.2d 327, 331 (Wis. 1963).

⁶⁵ *See, e.g.* Prager & Bear, Inc. v. Fed. Ins. Co., 136 Cal. Rptr. 340 (Ct. App. 1977); Gotcher Eng'g & Mfg. Co. v. U. S. Fid. & Guar. Co., 193 So. 2d 115 (Miss. 1966).

morning, found that there were four automobiles on the floor, is the count really an inventory computation that runs afoul of the exclusion?

In *Ace Wire & Cable Co. v. Aetna Casualty & Surety Co.*,⁶⁶ the appellate division of the New York Supreme Court addressed this issue. A corporate secretary of the insured submitted an affidavit stating that he had personally observed reels of wire cable in the warehouse on one date, but that those same reels were missing when he next examined the warehouse. His affidavit also stated that none of the reels were removed with his permission, consent or knowledge or that of any other officer of the insured.⁶⁷ The appellate division reversed the grant of summary judgment in favor of the carrier at the trial court level. It held that the personal knowledge of the manager was an actual physical count and not an inventory computation.⁶⁸ It explained its rationale as follows:

In our view, loss established by such personal observation and knowledge would be readily distinguishable from a loss established solely by reference to perpetual inventory records and a 'unit reconciliation' of the existing physical inventory with totals reflected therein, . . . i.e., testimonial evidence by a materials control manager that he helped to put particular items of property into a locked enclosure to which only employees had access, and that sometime later were gone⁶⁹

As the court remarked in that same case by way of analogy:

If the owner of an automobile locks it in a garage and later finds the garage empty, it would be an unwarranted strain on the language to say that he had made an 'inventory computation.

⁶⁶ 454 N.Y.S.2d 897 (App. Div. 1982) *aff'd*, 457 N.E.2d 761 (N.Y. 1983) [hereinafter *Ace I*].

⁶⁷ *Id.* at 899.

⁶⁸ *Id.* at 900-01.

⁶⁹ *Id.* 900 (citations omitted).

So, too, here, the plaintiffs' claim of loss would not appear to be wholly dependent upon an inventory computation" as the defendant maintains, rather, *inter alia*, upon a *specific enumeration of several of the missing items, reel by reel* based upon personal knowledge and a check of the inventory stock records against the individual items actually remaining on hand. . . . Under such circumstances, the role of the stock records would be reduced to that of "refreshment" material (i.e., a writing intended to "refresh" the recollection of a witness) or a "past recollection recorded" . . . but would not be the primary or sole evidence relied upon to establish the plaintiffs' loss.⁷⁰

Thus, where the insured is able to produce evidence of specific items that were in its possession, and then on a subsequent viewing were no longer in its possession, such will often not be considered an inventory computation, but rather an enumeration. As an enumeration, such evidence is frequently not seen to run afoul of the inventory computation prohibition contained in the inventory exclusion clause.⁷¹

In considering whether a calculation should be construed as an "inventory computation" or an "enumeration" care should be taken to develop facts in the appropriate circumstances to demonstrate whether the classification renders the exclusion nugatory or the insurance illusory. Additionally, claims in which the loss is presented as an enumeration should, as with all claims, be carefully examined in light of the practical operations of the insured's business, and the alleged methodology of the thefts.

⁷⁰ *Id.* (citations omitted) (emphasis added).

⁷¹ *Atlanta Coca-Cola Bottling Co. v. Transamerica Ins. Co.*, 61 F.R.D. 120 (N.D. Ga. 1973); *Popeo v. Liberty Mut. Ins. Co.*, 343 N.E.2d 417 (Mass. 1976); *Chenoweth-Chapman Corp. v. Am. Ins. Co.*, 553 S.W.2d 872 (Mo. Ct. App. 1977); *Paramount Paper Products Co. v. Aetna Cas. & Sur. Co.*, 157 N.W.2d 763 (Neb. 1968); *Schenectady Hardware & Elec. Co., Inc. v. Hartford Acc. & Indem. Co.*, 464 N.Y.S.2d 50 (N.Y. App. Div. 1983); *Ace I, supra* note 66; *Strings & Things in Memphis, Inc. v. State Auto Ins. Cos.*, 920 S.W.2d 652 (Tenn. Ct. App. 1995). *Accord* *Hanson PLC v. Nat'l Union Fire Ins. Co.*, 794 P.2d 66 (Wash. Ct. App. 1990).

F. Development of the modern absolute exclusion

The absolute inventory exclusion has been revised in some forms in format and simplified somewhat to read as follows:

- 1. Additional Exclusions:** We will not pay for loss as specified below:

...

- b. Inventory Shortages:** loss or that part of any loss, the proof of which as to its existence or amount is dependent upon:

- (1)** An inventory computation; or
- (2)** A profit and loss computation.⁷²

The most significant difference between these versions of the exclusion and the other common versions is that it eliminates the so-called “proviso” or exception to prior versions of the exclusion.

The Illinois Court of Appeal in *Reedy Industries, Inc. v. Hartford Insurance Co.*⁷³ reviewed a grant of summary judgment in favor of Hartford under the so-called “absolute” exclusion. The exclusion in question excluded:

loss or that part of any loss, the proof of which as to its existence or amount is dependent upon:

- (1)** an inventory computation; or
- (2)** a profit and loss computation.⁷⁴

⁷² SAA Form CR 00 01 10 90, *supra* note 10, Additional Exclusions, Conditions and Definitions D.1.b. (bold in original).

⁷³ N.E.2d 728 (Ill. App. Ct. 1999).

⁷⁴ *Id.* at 729.

Reedy's inventory manager, Michael Ward, testified that on visiting a warehouse in which freon containers were stored, he reviewed the company's records for that warehouse. From this, he concluded that there should have been 491 canisters of freon on hand on the particular day in which he was doing his inventory check. However, there were only 33 canisters on hand. The area was secured by lock and key. There was no evidence of an interloper or outside agent breaking in or otherwise gaining admission.⁷⁵ The insured's interrogatory responses stated that "it suspected" employee involvement but that it had no proof of such involvement.

The court held that the exclusion was enforceable and would be used to preclude coverage for the loss as no evidence existed as to the amount of the loss beyond the inventory computation. In doing so, the court explained the importance of the clause by stating:

The exclusion was designed to curb abuses by employers insured against employee dishonesty where covered losses were claimed on the basis of mere estimates, but the losses might actually be the result of bookkeeping errors, waste or negligence. . . . Despite its long-standing use in the insurance industry, there is scant Illinois case law construing this policy language, and there is a divergence of opinions among our sister states as to the [admissibility] of computations which fall within the exclusion and the effect of such exclusions upon proof of loss. . . .

Under the express terms of the policy, coverage is limited to a loss in excess of \$10,000 per occurrence. Even if we assume that [such] computations do not fall within the inventory shortages exclusion and that the missing freon was due to employee dishonesty, Reedy failed to present any evidence as to the number of occurrences and which occurrences, if any, are in excess of the deductible.⁷⁶

⁷⁵ *Id.* at 730.

⁷⁶ *Id.* at 732 (citations omitted).

The court went on to reject Reedy's claim that it was entitled to indemnity for "identified" employee losses. It pointed out that whether or not the employee could be identified, it was still necessary to present evidence that an employee perpetrated the alleged theft.⁷⁷

In *Security Insurance Co. of Hartford v. Wilson*,⁷⁸ the insurer sought declaratory relief that it was not obligated to indemnify its insured for loss under an employee dishonesty endorsement to a general business liability policy. That employee dishonesty endorsement contained an exclusion which excluded loss "under Insuring Agreement 1A or 1B (which cover employee dishonesty) to loss or to that part of any loss, as the case may be, the proof of which, either as to its factual existence or as to its amount, is dependent upon an inventory computation or a profit and loss computation."⁷⁹

The Wilsons contended that from April to September of 1979 their employee Rose Neal stole inventory and cash from their business. Mr. Wilson testified that no proof could be submitted as to the amount of the alleged loss other than the profit and loss computations submitted. Tenth Circuit held:

The language of section 2(b) is clear and unambiguous: A claim footed on alleged employee dishonesty must be supported by more than profit and loss computations. . . . In opposing the motion for summary judgment, the Wilsons had the burden to come forward with other evidence of the amount as well as the existence of the alleged loss to raise a general issue of material fact for trial on those essential elements of their claim. Their failure to do so—their admitted inability to do so—amply supports the district court's summary judgment against them on that issue. . . .⁸⁰

⁷⁷ *Id.* at 733. *Accord* *Jones v. Employers Mut. Cas. Co.*, 432 N.W.2d 535, 539 (Neb. 1988); *Blue Stripe, Inc. v. U.S. Fid. & Guar. Co.*, 360 S.E.2d 140, 141 (N.C. Ct. App. 1987).

⁷⁸ 800 F.2d 232 (10th Cir. 1986).

⁷⁹ *Id.* at 233.

⁸⁰ *Id.* at 233-34 (citations omitted).

Other decisions under the “absolute” exclusion have reached contrary results. For example, in *Strings & Things in Memphis, Inc. v. State Auto Insurance Cos.*,⁸¹ the insured sold musical instruments. It eventually discovered that a number of items that were subject to the floor plan financing used by it were missing. The missing items were identifiable by serial number and sale of any item would have been shown by a sales receipt with that serial number. These items were kept in secured areas.⁸²

The Court of Appeals reversed this summary judgment. It held:

When dealing with individual identifiable units, there is no computation involved; the unit is simply present and accounted for, or it is missing. We think it is significant that the policy language excludes a loss based on an inventory computation rather than on an enumeration of missing items. In the case at bar, the evidence showing the purchase of the individual items and the absence of these items from inventory without evidence of sale is not an inventory computation as contemplated in the policy.⁸³

In *New York University v. Continental Insurance Co.*⁸⁴ the New York Court of Appeals reviewed a motion to dismiss on the pleadings as to the insured’s claims for punitive damages and violation of New York’s Unfair Claims Act. The claim in question allegedly resulted from thefts from the clothing department at one of the University’s bookstores. Investigation by the university revealed what it believed to be the falsification of various order forms and invoices and other documents by one of its employees. The employees denied wrongdoing and proffered an explanation for their actions. Continental investigated and denied the claim citing in part the testimony by the employees.⁸⁵

⁸¹ 920 S.W.2d 652 (Tenn. Ct. App. 1995).

⁸² *Id.* at 657.

⁸³ *Id.*

⁸⁴ 662 N.E.2d 763 (N.Y. 1995).

⁸⁵ *Id.* at 766.

Of interest to this article is the court's ruling on the inventory exclusion. The dishonesty coverage of the subject policy contained an exclusion which excluded "loss, or that part of any loss, the proof of which as to its existence or amount is dependent upon (1) an inventory computation; or (2) a profit and loss computation".⁸⁶ The court of appeals held that the lower court had misapplied its decision in *Ace Wire & Cable Co v. Aetna Casualty & Surety Co.*⁸⁷ (which considered the appeal from *Ace I*⁸⁸) and reversed the trial court's ruling. In so doing, it held that recorded physical counts compared with post-theft physical counts did not constitute "inventory computations" but that "generalized estimates" would be excluded.⁸⁹

If explained this as a balance of interests stating:

Our decision in *Ace Wire* [i.e., *Ace II*] was driven by two competing considerations. On the one hand, construing the exclusion to apply to all proof of loss based on any form of inventory records would lead to the absurd result that an insured's recovery would be limited to those losses that were substantiated only by a witness who had actually viewed the employee stealing the insured's inventory. . . . On the other hand, insurers include the inventory shortage exclusion in the employee dishonesty endorsements to protect themselves against "claims based on an erroneous or falsified inventory or profit and loss computations . . . [and because] inventory records and other business records are less reliable than other evidence in proving that a loss of goods has been sustained or that a loss is attributable to employee dishonesty." . . . Accordingly, we held that to the extent an insured suffered losses that could be proven only by estimation of the loss by calculating the pre- and post-theft dollar value of the inventory, such losses would fall within the exclusion. Nothing in *Ace Wire* [i.e., *Ace II*],

⁸⁶ *Id.* at 771.

⁸⁷ 457 N.E.2d 761 (N.Y. 1983) [hereinafter *Ace II*].

⁸⁸ *Supra* note 66.

⁸⁹ *New York Univ.*, 662 N.E.2d at 771.

however, prevents insureds from relying on inventory records which document the actual inventory on hand.⁹⁰

The court concluded that by limiting the proof to records of physical inventories if encouraged frequent physical counts. It explained that by so doing, it would reduce the frequency and severity of losses, and protected the insurers from claims that could be proven only by “estimation.”⁹¹

The court held that because the insured had not established the amount of its loss by other than dollar estimates, it was error to dismiss an affirmative defense based upon the exclusion.⁹² In so doing it provided a helpful explanation of the purpose of the exclusion.

G. Profit and loss computation

There is little reported case law construing the profit and loss computation exclusion. One example appears in *Mapes Casino, Inc. v. Maryland Casualty Co.*,⁹³ Mapes Casino received notice from another casino that a large number of chips from Mapes Casino had been cashed at this second casino.⁹⁴ Mapes Casino investigated and arrested an intermediary, who testified that over a course of 20 months he had been cashing chips for unidentified employees of Mapes Casino. He would pick up drops of these chips and then cash them at other casinos in the area. Mapes submitted a claim of \$431,024 for alleged loss due to employee dishonesty. It did so by multiplying the total “drop” (beginning bank, plus cash and chips received, less chips taken from the table) times a normal 20% win factor. It by this means determined that the “normal” win would have been \$632,559 for the given time period but, subtracting the actual win of \$201,535 resulted in the figure that it used for its loss computation. The court declined to allow this measure of loss holding that it was a profit and loss computation. However,

⁹⁰ *Id.* (citations omitted).

⁹¹ *Id.*

⁹² *Id.* *Accord* *Blitz Corp. v. Hanover Ins. Co.*, 95C2725, 1996 WL 308233 (N.D. Ill. June 5, 1996); *HCA, Inc. v. Am. Prot. Ins. Co.*, 174 S.W.3d 184 (Tenn. Ct. App. 2005).

⁹³ 290 F. Supp. 186 (D. Nev. 1968).

⁹⁴ *Id.* at 193.

Mapes Casino was apparently able to produce witnesses who were able to testify as to the average amount of stolen chips cashed at the other casinos during a given week. The opinion does not contain the discussion of how it was determined that chips were being cashed “dishonestly” as opposed to honestly.⁹⁵ Other cases have also enforced the profit and loss portion of the exclusion.⁹⁶

V. VALUATION ISSUES

Inventory loss claims often raise significant legal and accounting issues relating to the compensable value of those losses under the Policy. An overview of the more common of those issues appears below.

In most commercial crime policies there are three types of property for which loss is covered: 1) Money, 2) Securities, and 3) property other than money and securities. Dealing with cases of property other than money and securities, once a loss has been established and its extent proven, a question arises as to the value of the covered loss.⁹⁷

The SAA and ISO forms provide guidance on this question on claimants seeking coverage. The SAA’s 1997 Crime General Provisions (Loss Sustained Form) General Condition B.19⁹⁸ provides:

- a. Subject to the applicable Limit of Insurance provision we will pay for:

....

⁹⁵ *Id.*

⁹⁶ *Sec. Ins. Co. of Hartford v. Wilson*, 800 F.2d 232 (10th Cir. 1986); *see also Fid. & Deposit Co. of Maryland v. S. Utilities, Inc.*, 726 F.2d 692 (11th Cir. 1984).

⁹⁷ *State Farm Fire & Cas. Ins. Co. v. White*, 777 F. Supp. 952, 955 (N.D. Ga. 1991).

⁹⁸ Crime General Provisions (Loss Sustained Form) CR 10 00 04 97 (April 1997) General Condition B.19.a.(3), *reprinted* in ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, at 717.

- (3) Loss of, or loss from damage to, ‘property other than money and securities’ or loss from damage to the ‘premises’ for not more than the:
- (a) Actual cash value of the property on the day the loss was discovered;
 - (b) Cost of repairing the property or “premises”; or
 - (c) Cost of replacing the property with property of like kind and quality.

We may at our option pay the actual cash value of the property or repair or replace it.

If we cannot agree with you upon the actual cash value or cost of repair or replacement, the value or cost will be determined by arbitration.⁹⁹

The 2002 ISO Loss Sustained Form departs from the language of the 1995 form. Commercial Crime Policy, CR 00 23 07 02 Condition E.1.z. provides:

z. Valuation—Settlement

- (1) Subject to Section B. Limit of Insurance provision, we will pay for:

....

- (c) Loss of or damage to “other property” or loss from damage

⁹⁹ *Id.* (bold in original).

to the “premises” or its exterior for the replacement cost of the property without deduction for depreciation. However, we will not pay more than the least of the following:

- (i) The Limit of Insurance applicable to the lost or damages property;
- (ii) The cost to replace the lost or damaged property with property of comparable material and quality and used for the same purpose or;
- (iii) The amount you actually spend that is necessary to repair or replace the lost or damaged property.¹⁰⁰

We will not pay on a replacement cost basis for any loss or damage:

- (i) Until the lost or damages property is actually repaired or replaced; and
- (ii) Unless the repairs or replacement are made as soon as reasonably

¹⁰⁰ ISO Form CR 00 23 07 02, *supra* note 11, Condition E.1.z. (bold in original).

possible after the loss or damage.¹⁰¹

The 2002 form states that it will only pay to the maximum limit of the insurance, and if that limit is not breached the lesser of the replacement or repair costs. It also places additional conditions upon the insured to make certain that the replacement or repairs are done in a reasonable and timely manner. The policy does not provide coverage prior to the replacement or repair, rather the insured must first expend funds before coverage accrues.

Courts dealing with valuation of property other than money and securities have generally taken a two-step approach. The primary question is always whether the injured, lost or damaged property is property as defined by the policy. Most policies have a provision defining property as “any tangible property that has an intrinsic value.”¹⁰² This provision limits recovery on some forms of intellectual property that is intangible, but raises the second question of the value of the property in cases where the intellectual property exists upon or in a tangible form.

In *Peoples Telephone Co., Inc. v. Hartford Fire Insurance Co.*¹⁰³ the United States District Court for the Southern District of Florida dealt with a case where the alleged covered property was the combination of electronic serial numbers with mobile telephone identification numbers.¹⁰⁴ Peoples Telephone Co. provided cell phone service to rental car fleets, and one of their former employees stole the number combinations that would allow activation and use of a cellular phone.¹⁰⁵ They sought to recover almost \$660,000 from Hartford in cell phone

¹⁰¹ *Id.* (bold in original).

¹⁰² See, e.g., *Avery Dennison Corp. v. Allendale Mut. Ins. Co.*, 47 Fed. App'x. 481, 482 (9th Cir. 2002); *Holloway Sportswear, Inc. v. Transp. Ins. Co.*, 177 F. Supp. 2d 764, 772 (S.D. Ohio 2001), *aff'd*, 58 Fed. App'x. 172 (6th Cir. 2003); *Peoples Tel. Co., Inc. v. Hartford Fire Ins. Co.*, 36 F. Supp. 2d 1335, 1337 (S.D. Fla. 1997); *Simon Mktg. v. Gulf Ins. Co.*, 57 Cal. Rptr. 3d 49, 50 n.3 (Ct. App. 2007).

¹⁰³ 36 F. Supp. 2d 1335.

¹⁰⁴ *Id.* at 1336.

¹⁰⁵ *Id.*

charges, allegedly stolen by use of the number combinations.¹⁰⁶ Hartford, for its part, claimed that the property was not covered, because it was intangible. The court agreed that the lists in and of themselves may have been tangible, but that the loss was best characterized as an intangible disclosure of confidential information.¹⁰⁷ Because the property was not property as covered by the policy it could have no value, although Peoples Telephone Co. had suffered real damages by the loss.

Similarly, trade secrets, although they can exist as an idea on paper or some other electronic media do not constitute tangible property for purposes of valuation. The cases of *Avery Dennison Corp. v. Allendale Mutual Insurance Co.*¹⁰⁸ and *Holloway Sportswear, Inc. v. Transportation Insurance Co.*¹⁰⁹ both deal with the theft of trade secrets by former employees. In both cases the federal courts held that trade secrets by definition were intangible, and as the policies effecting the claims required that the covered property be tangible, no such coverage existed for trade secrets.¹¹⁰

However, other forms of intellectual property, placed upon a tangible medium, have been deemed as covered property by the court and the question of their “value” left to a jury to decide. In *State Farm Fire & Casualty Insurance Co. v. White*,¹¹¹ State Farm sought a declaratory judgment that its policy did not cover stolen architectural plans that were the subject of a companion suit. In the companion case plaintiff owners of the plans alleged that defendant White had taken the plans and built apartment complexes by using the stolen plans.¹¹² State Farm stressed that its policy covered only “tangible” property and that the real value of the paper and ink property was the idea contained therein.¹¹³ The court, while skirting the actual issue of value, determined

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 1339.

¹⁰⁸ 47 Fed. App’x. 481.

¹⁰⁹ 177 F. Supp. 2d 764.

¹¹⁰ *Avery Dennison Corp.*, 47 Fed. App’x. at 482; *Holloway Sportswear, Inc.*, 177 F. Supp. 2d at 772.

¹¹¹ 777 F. Supp. 952 (N.D. Ga. 1991)

¹¹² *Id.* at 953.

¹¹³ *Id.* at 954.

that the plans were “tangible property” under the construction of the policy, and as such the loss was covered.¹¹⁴ It left for another day the “question of fact regarding the relative valuation of the components of a printed architectural plan.”¹¹⁵

In cases where the property represents some value beyond its own intrinsic value, courts have reached divergent results. In *Simon Marketing v. Gulf Insurance Co.*¹¹⁶ and *Kelch v. Industrial Indemnity Co.*¹¹⁷ the California and Oregon state courts, respectively, considered cases where the intrinsic value of the property (paper and ink) failed to represent the actual value of the loss. In *Simon Marketing* an employee stole McDonald’s game pieces with a total redemption value of \$21 million.¹¹⁸ The employee distributed the winning game pieces to friends who then provided him kickbacks. Because of the theft and subsequent lawsuits, Simon Marketing was forced to close and wind down its business, and filed claims with its insurers for the lost value of the business as well as fees in defending the various lawsuits.¹¹⁹ The court determined that the various policies did not cover Simon’s losses as such losses were not direct losses suffered because of the theft.¹²⁰ The only direct loss was the loss of the game pieces, by which the court determined Simon suffered no loss as the value of the game pieces was paid out by McDonald’s and not Simon.¹²¹ The court held that, “if the game pieces had any value apart from the cost of the paper or materials, their value was their redemption value.”¹²² That redemption value was a loss suffered by McDonald’s, and the defendant insurers bore no duty to reimburse Simon for McDonald’s losses.¹²³

¹¹⁴ *Id.* at 955.

¹¹⁵ *Id.*

¹¹⁶ 57 Cal. Rptr. 3d 49 (Ct. App. 2007).

¹¹⁷ 763 P.2d 402 (Or. Ct. App. 1988).

¹¹⁸ *Simon Mktg.*, 57 Cal. Rptr. 3d at 50.

¹¹⁹ *Id.* at 51-52.

¹²⁰ *Id.* at 54.

¹²¹ *Id.* at 55.

¹²² *Id.*

¹²³ *Id.*

*Kelch v. Indemnity Co.*¹²⁴ similarly dealt with employee theft of paper work whose intrinsic value was limited, but whose actual value greatly affected the small business owner's bottom line. A bookkeeper embezzled cash from a small lumber and hardware store. In addition, several valuable pieces of paper including invoices, accounts receivable cards, and customer checks were also discovered missing.¹²⁵ The insurance policy provided coverage for the cost of blank replacement paper plus the material and labor costs of reproduction. The plaintiffs argued that the calculated value, however, of the materials was approximately \$40,000.¹²⁶ The court considered the limitations and property provisions of the contract and found several ambiguities related to valuation. Construing those ambiguities in favor of the plaintiff and against the defendants it allowed the factual question of value to go forward to trial.¹²⁷

Issues of replacement and repair also raise questions of value. What is the value to a manufacturer of goods that were stolen or fraudulently converted by an employee? In *James B. Lansing Sound, Inc. v. National Union Fire Insurance Co.*¹²⁸ the defendant argued that the covered cost was the remanufacture cost.¹²⁹ The plaintiff argued that the value should be the fair market or wholesale value.¹³⁰ The Ninth Circuit held that "actual cash value" meant the manufacturer's wholesale list price of the stolen goods.¹³¹

Given the scarcity of reported case law construing the terms "actual cash value" and "replacement cost" in fidelity insurance forms, courts may choose to consider similar terms found in property insurance policies, and reported decisions construing those terms. A brief overview of this body of law is appropriate. Property insurance policies often have actual cash value, replacement and repair terms intended to

¹²⁴ 763 P.2d 402.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.* at 404.

¹²⁸ 801 F.2d 1560 (9th Cir. 1986), *amended by* 981 F.2d 1549 (9th Cir. 1992).

¹²⁹ *Id.*

¹³⁰ *Id.* at 1564.

¹³¹ *Id.* at 1565.

make an insured whole from a property loss, while avoiding giving the insured a windfall. Three tests are generally used to determine the actual cash value of property: (1) market value (price a willing buyer would pay a willing seller, where neither party was under any compulsion)¹³²; (2) replacement cost (amount it would cost to replace or rebuild lost property exactly as it was at the time of the loss)¹³³; or (3) broad evidence rule (allowing the fact finder to consider all relevant evidence for valuation including both the fair market value and replacement cost).¹³⁴ The broad evidence rule has not been adopted in fidelity insurance cases, however, its principle of determining actual cash or replacement value by use of all relevant evidence has broad acceptance in the property insurance field.¹³⁵

While the broad evidence rule focuses on the equitable outcome of an insurance claim, the valuation clauses incorporating the market value (or fair market value) and replacement cost measures have been interpreted in property cases to have more empirically precise meanings.

¹³² *Bartindale v. Aetna Ins. Co.*, 145 A. 633, 634 (N.J. Sup. Ct. 1929).

¹³³ *SR Int'l Bus. Ins. Co., Ltd. v. World Trade Ctr. Properties LLC*, 01 CIV. 9291 HB, 2006 WL 3073220, 6 (S.D.N.Y. Oct. 31, 2006), *opinion clarified sub nom. Sr Int'l Bus. Ins. Co., Ltd. v. World Trade Ctr. Properties, LLC*, 01 CIV. 9291HB, 2007 WL 519245 (S.D.N.Y. Feb. 16, 2007).

¹³⁴ *Elberon Bathing Co., Inc. v. Ambassador Ins. Co., Inc.*, 389 A.2d 439, 444 (N.J. 1978).

¹³⁵ See e.g. *Sullivan v. Liberty Mut. Fire Ins. Co.*, 384 A.2d 384, 386 (Conn. 1978); *New York Cent. Mut. Fire Ins. Co. v. Diaks*, 69 So. 2d 786, 788-89 (Fla. 1954); *Travelers Indem. Co. v. Armstrong*, 442 N.E.2d 349, 356 (Ind. 1982); *Mamou Farm Services, Inc. v. Hudson Ins. Co.*, 488 So. 2d 259, 263 (La. Ct. App. 1986); *Kingsley v. Spofford*, 11 N.E.2d 487, 491 (Mass. 1937); *Brooks Realty, Inc. v. Aetna Ins. Co.*, 149 N.W.2d 494, 501 (Minn. 1967); *Erin Rancho Motels, Inc. v. U.S. Fid. & Guar. Co.*, 352 N.W.2d 561, 564-65 (Neb. 1984); *Elberon Bathing Co.*, 389 A.2d at 443; *McAnarney v. Newark Fire Ins. Co.*, 159 N.E. 902, 905 (N.Y. 1928); *Surratt v. Grain Dealers Mut. Ins. Co.*, 328 S.E.2d 16, 20 (N.C. Ct. App. 1985); *Sudvary v. Ohio Farmers Ins. Co.*, 48174, 1984 WL 6351 (Ohio Ct. App. Dec. 6, 1984); *Rochester Am. Ins. Co. v. Short*, 252 P.2d 490, 493 (Okla. 1953); *Vogt v. R.I. Joint Reinsurance Ass'n*, 1999 WL 106207, at *2 (R.I. 1999); *Lampe Mkt. Co. v. Alliance Ins. Co.*, 22 N.W.2d 427, 428 (S.D. 1946); *Manhattan Fire & Marine Ins. Co. v. Melton*, 329 S.W.2d 338, 344 (Tex. Civ. App. 1959); *Strauss Bros. Packing Co., Inc. v. Am. Ins. Co.*, 298 N.W.2d 108, 109 (Wis. Ct. App. 1980); *contra C.L. Maddox, Inc. v. Royal Ins. Co. of Am.*, 567 N.E.2d 749, 757 (Ill. App. Ct. 1991).

Market value is time specific, meaning the value of the property at or immediately prior to the loss.¹³⁶ It is the amount for which the property would be sold by a willing seller who is not compelled to sell it to a buyer who is willing but not compelled to buy it.¹³⁷ Market value assumes that there is a ready market for the property lost, and that such property could be obtained by going back out into the market.¹³⁸ Where no market exists or where the market value would be inadequate “actual cash value” means “value to the owner” or the loss suffered by being deprived of the property.¹³⁹ In such cases courts consider original cost to acquire, replacement cost, condition and use of the property in determining the value of the loss.¹⁴⁰

Replacement cost as a consideration in property cases seeks to reimburse the policy holder for value that would be unrecoverable where the market value is less than the actual loss sustained. Replacement cost provisions generally refer to “[t]he cost to rebuild or replace, at the same site, the lost, damaged or destroyed property, with other property of comparable size, material and quality”¹⁴¹ Generally, it means replacing the property with the same kind and quality of materials as existed in the original. In some cases where building codes, or other laws and ordinances make it impossible to replace using the exact same material,

¹³⁶ Fire Ins. Exch. v. Superior Court, 10 Cal. Rptr. 3d 617, 629 (Ct. App. 2004); Nat’l Fire Ins. Co. v. Banister, 121 S.E.2d 46, 47 (Ga. Ct. App. 1961); Gendron v. Pawtucket Mut. Ins. Co., 384 A.2d 694, 697 (Me. 1978); U. S. Fire Ins. Co. v. Stricklin, 556 S.W.2d 575, 582 (Tex. Civ. App. 1977), *writ refused NRE sub nom.* Stricklin v. U.S. Fire Ins. Co., 565 S.W.2d 43 (Tex. 1978).

¹³⁷ Gendron, 384 A.2d at 697; Olson v. Le Mars Mut. Ins. Co. of Iowa, 696 N.W.2d 453, 458 (Neb. 2005); DePhelps v. Safeco Ins. Co., 65 P.3d 1234, 1240 (Wash. Ct. App. 2003).

¹³⁸ Clift v. Fulton Fire Ins. Co., 315 S.W.2d 9, 11 (Tenn. Ct. App. 1958); *see also* Britven v. Occidental Ins. Co., 13 N.W.2d 791, 793 (Iowa 1944).

¹³⁹ Clift, 315 S.W.2d at 11; Britven, 13 N.W.2d at 793.

¹⁴⁰ Clift, 315 S.W.2d at 11; Britven, 13 N.W.2d at 793.

¹⁴¹ SR Int’l Bus. Ins. Co., Ltd. v. World Trade Ctr. Properties LLC, 01 CIV.9291 HB, 2006 WL 3073220 (S.D.N.Y. Oct. 31, 2006), *opinion clarified sub nom.* Sr Int’l Bus. Ins. Co., Ltd. v. World Trade Ctr. Properties, LLC, 01 CIV. 9291HB, 2007 WL 519245 (S.D.N.Y. Feb. 16, 2007).

courts have allowed reimbursement under replacement cost for such changes in design and material as required to satisfy updated codes.¹⁴²

For fidelity claims, courts may look to similarly worded property policy provisions and case law to interpret the valuation provisions of fidelity policies. Care must be taken however to determine that no specific authority construing the evaluation provision under fidelity forms exists that the particular jurisdiction would apply. Additionally, the property form needs to be compared carefully in pertinent parts to the fidelity form to determine if the language is truly similar. Finally, the facts of the reported decision on the property policy need to be considered to determine whether it makes logical sense to apply the decision to a fidelity claim.

VI.

V. ACCOUNTING AND INVESTIGATIVE ISSUES

A. Accounting

When presented with a claim which potentially involves inventory computation, an important task is to determine and validate the existence of an inventory computation or inventory enumeration. The term computation is not defined.

Enumeration is one method, employing inventory records, used by some courts to allow the use of inventory records to substantiate the loss amount and not be considered a computation.¹⁴³

Accounting professionals define “inventory” to include the following:

- 1) items held for sale (finished goods),
- 2) items in process that will be held for sale (goods in process), and

¹⁴² *Id.* at *9.

¹⁴³ Mund & Studler, *supra* note 1, at 181.

3) items that will be used in the production process (raw materials).¹⁴⁴

Internationally, “inventories” are assets:

- a) held for sale in the ordinary course of business;
- b) in the process of production for such sale; or
- c) in the form of materials or supplies to be consumed in the production process in the rendering of services.”¹⁴⁵

The concepts of inventory computation and inventory enumeration are non-existent in the U.S. General Accepted Accounting Standards and International Financial Reporting Standards.

However, in the world of accounting, the valuation of inventory is of major importance for two reasons:

1. Inventories generally constitute a major portion of the current assets; consequently, they have a significant impact on working capital and a company’s current position.

2. Inventory valuation has a major and immediate impact on the reported amount of net profit.¹⁴⁶

“The objective of the accounting realm is to accurately reflect the results of a company within Generally Accepted Accounting

¹⁴⁴ BILL D. JARNAGIN, U.S. MASTER GAAP GUIDE 130 ¶ 301 (rev. ed. 2002).

¹⁴⁵ INTERNATIONAL ACCOUNTING STANDARDS BOARD, INTERNATIONAL FINANCIAL REPORTING STANDARDS 2007 (IFRSs) 844 (2007) [hereinafter IFRSs]

¹⁴⁶ *Id.* at 253.

Principles¹⁴⁷ and, if possible, obtain the best possible legal tax consequences.”¹⁴⁸

The current 2008-2009 recession has devastated and questioned the associated risks, uncertainties and changes in value related to the increasing use of derivatives and other securities. The U.S. Financial Accounting Standards Board¹⁴⁹ in trying to address the savings and loan crises of the 1980s, determined that it was fueled by the historical cost methods in place at the time, which allowed financial institutions to engage in gains trading.¹⁵⁰ Gains trading allowed financial institutions that held assets and liabilities where the current market value differed markedly from historical cost values on the financial statement to choose which assets to sell based on the gain or losses realized, especially in particular accounting periods. This was a powerful tool to manage the income statement. During capital shortage, management would sell well performing assets to realize gains and retain poor performing assets concealing unrealized losses.¹⁵¹

Generally Accepted Accounting Principles for new financial instruments, both in the United States and internationally, were and are being developed on an issue-by-issue basis.

In June 1997, the FASB issued SFA No. 130 whereby changes in certain assets were being recorded directly in equity bypassing the income statement. The FASB required that changes in equity be reported individually and with the same prominence as other financial statements in financial reports. If the losses are later determined to be other than

¹⁴⁷ Hereinafter GAAP.

¹⁴⁸ Mund & Studler, *supra* note 1, at 195.

¹⁴⁹ Hereinafter FASB.

¹⁵⁰ Heidi N. Moore, *Deal Journal Q&A: Ending the Mortgage Crisis Through Accounting*, WALL ST. J., March 13, 2009, <http://blogs.wsj.com/deals/2009/03/13/deal-journal-qa-ending-the-mortgage-crisis-through-accounting/>.

¹⁵¹ James S. Chanos, *We Need Honest Accounting*, WALL. ST. J., Mar. 23, 2009.

temporary, companies must take the impairment charges and lower net income.¹⁵² This is called “mark-to-market.”

The preceding discussion reveals multiple measurement techniques for valuing assets. Consider the following measurement methods and requirements which make an asset value in a balance sheet look like adding apples and oranges:

Asset	Measurement Basis
Cash	Current value
Accounts Receivable	Expected future value
Marketable securities	Fair value or amortized cost
Inventory	Current or past value
Investments	Fair value or amortized cost
Property, plant, and equipment	Past value adjusted for depreciation ¹⁵³

In the accounting realm, inventory valuation differs from the valuation methods for other assets. The amounts disclosed for other assets reflect the approximate amount of cash expected to be received for the asset, such as, a derivative or CDO valued at “mark-to-market.”

Inventory does not represent future cash receipts but rather the acquisition value of a cost incurred to generate future cash receipts.¹⁵⁴

Many accountants advocate valuing inventories at market because they believe that current assets should reflect current values. This might add to the information content of the working capital computation, but to date the doctrine of conservatism has been seen as overriding the advantages claimed by current valuation advocates. Nevertheless, when inventories have declined in value, current GAAP maintains that the future selling price will move in the same direction and that anticipated future losses should be recorded in the same period as the inventory decline.

¹⁵² Michael Rapoport, *Accounting Rules Should Avoid Impairment*, WALL ST. J., Apr. 1, 2009.

¹⁵³ RICHARD G. SCHROEDER ET AL., FINANCIAL ACCOUNTING THEORY AND ANALYSIS, TEXT READINGS AND CASES 216 (8th ed. 2005).

¹⁵⁴ *Id.* at 253.

The American Institute of Certified Public Accountants¹⁵⁵ has provided the following definitions to use in applying the lower of cost or market rule to inventories.

As used in the phrase “lower of cost or market” the term market means current replacement cost (by purchase or reproduction, as the case may be) except that:

- 1) market should not exceed the net realizable value (i.e., estimated selling price in the ordinary course of business less reasonably predictable costs of completion and disposal), and
- 2) market should not be less than net realizable value reduced by an allowance for an approximately normal profit margin.¹⁵⁶

By “net realizable value” the following is meant:

Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction.

Net realizable value refers to the net amount that an entity expects to realize from the sale of inventory in the ordinary course of business. Fair value reflects the amount for which the same inventory could be exchanged between knowledgeable and willing buyers and sellers in the marketplace. The former is an entity-

¹⁵⁵ Hereinafter AICPA.

¹⁵⁶ SCHROEDER, *supra* note 153, at 252-53.

specific value; the latter is not. Net realizable value for inventories may not equal fair value less costs to sell.¹⁵⁷

When the cost of inventory exceeds its expected benefit, a reduction in inventory value to fair value (market value) better represents its expected future benefit. The lower of cost or fair value is a conservative concept stressed in FASB Statement of Concepts No. 6.¹⁵⁸

The major criticism of lower of cost or market rule is that losses from holding inventory (“holding losses”)¹⁵⁹ are recognized but gains from holding inventory (“holding gains”)¹⁶⁰ are ignored. However, the FASB has deemed the concept of conservatism in financial statement is more important in FASB Concept No. 5 than ignoring holding gains.¹⁶¹

However, one should consider these FASB concepts when determining values as defined by policies in the insurance realm when we discuss inventory valuation. The following flow charts illustrate documentation related to the inventory function:

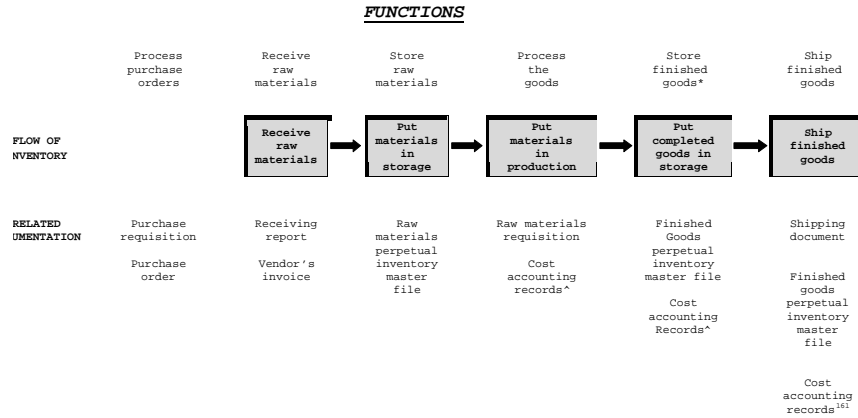
¹⁵⁷ IFRSs, *supra* note 145, at 844.

¹⁵⁸ 3 FINANCIAL ACCOUNTING STANDARDS BOARD, ORIGINAL PRONOUNCEMENTS, ACCOUNTING STANDARDS AS OF JUNE 1, 2002, 1146-47 (2002)

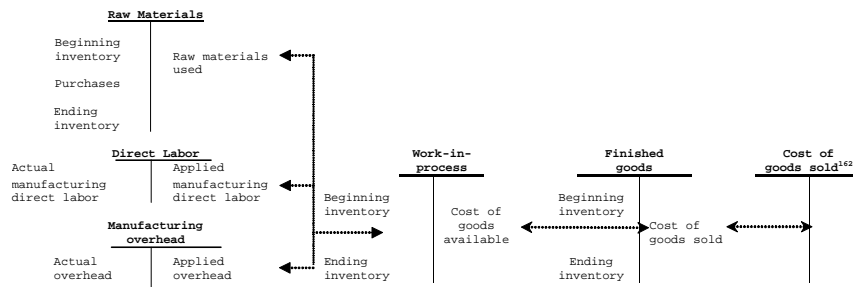
¹⁵⁹ Hereinafter holding losses.

¹⁶⁰ Hereinafter holding gains.

¹⁶¹ 3 FINANCIAL ACCOUNTING STANDARDS BOARD, *supra* note 158, at 1103.



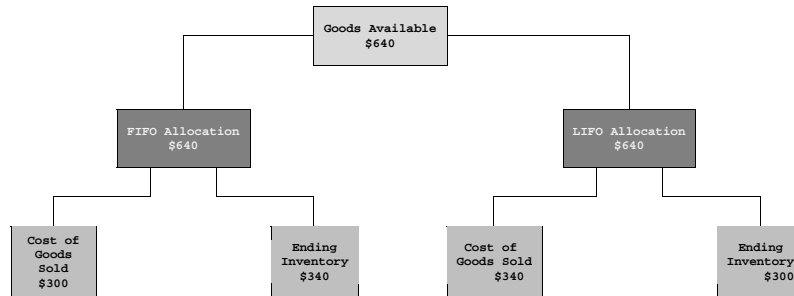
This documentation is used to build the flow of inventory and inventory values.



In turn the cost is used to calculate Ending Inventory for the balance sheet and Cost of Goods Sold for the Income Statement. Assuming Cost of Goods available is \$640.00 under Cost Accounting:

¹⁶² ALVIN A. ARENS & JAMES K. LOEBBECKE, AUDITING-AN INTEGRATED APPROACH 648 (8th ed. 2000).

¹⁶³ *Id.* at 647.

(a) Historical Cost Accounting¹⁶²

Inventory value is calculated from quantities and flow of the inventory. The flow of the inventory denotes the value by which the inventory receives.

Quantity of inventory is determined by various methods:

- 1) actual count,
- 2) perpetual records, or
- 3) estimating procedures.

Different methods of evaluating and determining the quantity and unit prices of specific items in inventory are used.

The most frequently used estimating method is the retail method. The retail method allows merchandise to be sold directly to the customer. This method is used most frequently by department and/or discount stores. For example, Best Buy uses the retail method for some of its inventory. Computation of the retail value of inventory is attained by subtracting the retail price of goods sold from the retail price of goods available. Thus, by applying the average mark up percentage to the ending inventory, the value of inventory is calculated using the retail method.

¹⁶⁴ LAWRENCE REVSINE ET AL., FINANCIAL REPORTING & ANALYSIS 402 (2d ed. 2002).

The gross profit method is another estimating method used to calculate the value of ending inventory on a dollar basis by subtracting the estimated cost of sales from the cost of goods available. For losses such as fire or theft, this method is especially useful. This method is also useful for estimating inventories for interim financial statements.

Both of the above methods, retail and gross profit methods, are considered estimation methods. Estimation methods are used when it is not possible or is impractical to count or maintain perpetual inventory records.

In addition to estimation methods, the perpetual records method is used to establish inventory quantity. Using this method, all inventory items are recorded as purchases and sales occur. At this point, the amount of inventory on hand and the amount shown in the accounting records should be equal. Perpetual records must be verified by an actual count at least once a year. This method increases accounting control over inventories. However, the perpetual system should only be used when the benefits gained from maintaining the records are greater than the cost of the record keeping.

Audited financial statements, issued by businesses, are usually required to actually count all inventory items at minimum of once a year unless there is reasonable assurance that the inventory figures are correct. For example, a periodic inventory system wherein the inventory amount is used to determine the ending inventory; assuming all goods not on hand were sold, but taking into account factors such as spoilage, shoplifting, are necessary.

An actual counting of goods on hand should be completed on an annual basis. Even though profit and retail methods provide approximated balance sheet values, these methods fail to provide business entities with the information that may be necessary to qualify the quantity and unit prices of specific items in inventory.¹⁶⁵

Given the significant cost to do complete actual inventory counts, businesses often undertake cycle counts or estimation to reduce expenses.

¹⁶⁵ SCHROEDER ET AL., *supra* note 153, at 253-54.

The enumeration method discussed in the published opinion *Strings & Things v. State Auto Insurance*¹⁶⁶ provides an example in reported case law of perpetual records method. As the court stated, “All of the missing items were identifiable by serial number, and a sale of any of the items would have been evidenced by a sales receipt.”¹⁶⁷

However, to verify or validate that an entity’s perpetual records method is accurate, a complete physical inventory count should be undertaken at least annually. The lack of a consistent and accurate comparison between the perpetual records and actual physical count results would invalidate the entity’s perpetual records as reasonable, until proven otherwise.

In *Strings & Things*,¹⁶⁸ the appellate court recognized the inventory was subject to floor plan financing and had consistent complete actual inventory counts done by the finance company. Upon determining the quantity of the inventory in question, we turn to the second leg of inventory—valuation. Flow assumptions of the inventory denote the value of inventory.

The primary goal of inventory valuations has been matching costs with associated revenues. Or, balance sheet valuation has been viewed as secondary to income determination. The four flow of inventory assumptions, discussed below, require a trade-off between asset valuation and income determination. From purchase to sale, these four methods are used to follow the processes: (1) First in, First out,¹⁶⁹ (2) Last in, First out,¹⁷⁰ (3) Averaging, and (4) Specific Identification.

The FIFO method is generally the assumption adhering to reality, because the oldest items in inventory are items a business wants to sell first. For example, perishables; the oldest items must sell first, or they will spoil equating to not only inventory loss but bottom-line profit loss.

¹⁶⁶ 920 S.W.2d 652 (Tenn. Ct. App. 1995).

¹⁶⁷ *Id.* at 654.

¹⁶⁸ 920 S.W.2d at 657.

¹⁶⁹ Hereinafter FIFO.

¹⁷⁰ Hereinafter LIFO.

Inflation effects have caused accountants to question the use of the FIFO method. An inflated net profit figure is created when using older, lower unit costs during an inflationary period. This inflated net profit not only can be misleading to financial statement users, it may also result in additional income taxes. The more positive side of FIFO is the fact that the valuation of inventory more closely resembles the replacement cost of inventory items, thus allowing financial statement users to evaluate future working capital flows more accurately.

The first in, first out method satisfies the historical cost and matching principles because the amount recorded for the cost of goods sold is similar to the amount that would have been recorded under specific identification, if the actual flow of goods were on the FIFO method.

Therefore, the FIFO method is based on assumptions related to the actual flow of merchandise throughout the business. It could be considered an approximation of specific identification.

The LIFO is the method of inventory valuation, used for external financial reports. Many companies might not consider LIFO were it not for the income tax considerations. This is one of the major differences between LIFO and FIFO. The difference being cost of goods sold times the company's marginal tax rate is used to calculate the tax benefit. Additionally, the Internal Revenue Service requires this method be used for income tax reporting.

Misrepresentation of earnings may occur when normal inventory levels are diminished. If inventory levels fall below the normal units in any year, the older, usually much lower, cost of these items are charged to cost of goods sold and matched against current sales revenue dollars, creating an inflated net income amount that may not be supportable. The SEC requires a material LIFO liquidation be reported in the company's 10-K report, should liquidation occur.

The LIFO method of inventory valuation is based on the theory that current costs should be matched against current revenues. Most advocates of LIFO cite the matching principle as the basis for their stance and argue that decades of almost uninterrupted inflation require the LIFO method be used to more closely approximate actual net income.

These arguments are also based on the belief that price level changes should be eliminated from the financial statements.

Averaging techniques are a compromise between LIFO and FIFO. Each purchase affects both inventory valuation and cost of goods sold when the averaging technique is utilized. Averaging therefore does not result in either a good match of costs with revenues or a proper valuation of inventories in fluctuating market conditions. The necessity of periodic presentation is the basis of argument for supporters of the averaging technique. Thus, transactions during a particular period are viewed as reflective for the period as a whole rather than as individual transactions. Averaging technique supporters assert that financial statements should reflect the operations of the entire period as a whole versus a series of transactions.

Upon considering weighted or moving weighted methods, an argument can be made that the cost of goods sold is reflective of the total period's operations, creating an inventory valuation not representative of expected future cash flows. Using the simple average method resulting valuations can result in completely distorted unit prices when lot sizes and prices are changing.

Specific Identification is the most appropriate inventory valuation where an exact matching of expenses and inventory is the primary goal. Because the valuation of inventories at original cost generally has little relation to future expectations, this valuation method has low informational content to balance sheet readers.

The specific identification method is used when cost is determined by keeping a separate record for each item acquired and totaling the cost of the inventory items on hand at the end of each accounting period. Most companies have found that the cost of the required recordkeeping necessary for this method outweighs any expected benefits. Therefore, they implement other methods. When the volume of sales is low and the cost of individual items is high, such as with jewelry, automobiles, and yachts, the specific identification method may be applicable.¹⁷¹

¹⁷¹ SCHROEDER ET AL., *supra* note 153, at 254-55.

The U.S. Generally Accepted Account Procedures¹⁷² allows some choice and persuasion in the flow of inventory allowing income statement management. However, International Accounting Standards indicates:

23. The cost of inventories of items that are not ordinarily interchangeable and goods or services produced and segregated for specific projects shall be assigned by using specific identification of their individual costs.
24. Specific identification of cost means that specific costs are attributed to identified items of inventory. This is the appropriate treatment for items that are segregated for a specific project, regardless of whether they have been bought or produced. However, specific identification of costs is inappropriate when there are large numbers of items of inventory that are ordinarily interchangeable. In such circumstances, the method of selecting those items that remain in inventories could be used to obtain predetermined effects on profit or loss.
25. The cost of inventories, other than those dealt with in paragraph 23, shall be assigned by using the first-in, first-out or weighted average cost formula. An entity shall use the same cost formula for all inventories having a similar nature and use to the entity. For inventories with a different nature or use, different cost formulas may be justified.¹⁷³

International Accounting Standards designate FIFO and weighted average cost as bench mark methods. Of six hundred companies surveyed by AICPA in 2000, of the 301 companies using

¹⁷² Hereinafter GAAP.

¹⁷³ IFRSs, *supra* note 145, at 847.

LIFO only 24 firms exclusively used LIFO because LIFO is prohibited in most countries outside the United States.¹⁷⁴

The AICPA and International Accounting Board recognize all methods except specific identifications are methods of financial statement and tax management methods.

As discussed above in *Strings & Things*,¹⁷⁵ the court reviewed this issue as follows:

The language in the policy in this case refers to an “inventory computation,” which denotes some type of mathematical calculation. Considering the language used, we feel that the holding of the court in *Ace Wire* correctly construes the policy exclusion as not applying to a physical count of individually identifiable units of inventory. When dealing with individual identifiable units, there is no computation involved, the unit is simple present and accounted for, or it is missing. We think it is significant that the policy language excludes a loss based on an inventory computation rather than an enumeration of missing items. . . .¹⁷⁶

Reviewing accounting records to verify and validate whether an enumeration was used involves:

- 1) the actual count history of inventory on a consistent basis with accurate results,
- 2) perpetual records, and
- 3) specific identification to actual cost.

While some courts deem historical actual counts of inventory on a consistent basis with accurate results as optional in some court cases;

¹⁷⁴ REVSINE ET AL., *supra* note 163, at 398.

¹⁷⁵ 920 S.W.2d 652 (Tenn. Ct. App. 1995).

¹⁷⁶ *Id.* at 657, *citing Ace II*, *supra* note 87, 764-65.

*Ace II*¹⁷⁷ does not address historical accuracy of the perpetual records. However *Strings & Things*¹⁷⁸ indicates the accuracy of historical physical inventory counts in their decision, as does the court in *HCA, Inc. v. American Protection Insurance Co.*¹⁷⁹

B. Evidence

The evidence provided by the insured impacts the reasonableness of the quantum of loss purportedly supported by an inventory or profit and loss computation.

Modern fidelity forms contain the following limitation of evidence provided by the insured regarding an inventory computations. For example, ISO Form CR 00 23 07 02 provides in relevant part:

D. Exclusions

....

2. Insuring Agreement **A.1.** does not apply to:

....

b. Inventory Shortages

Loss, or that part of any loss, the proof of which as to its existence or amount is dependent upon:

- (1) An inventory computation; or
- (2) A profit and loss computation.

¹⁷⁷ *Supra* note 87, at 764.

¹⁷⁸ *Strings & Things*, 920 S.W.2d 656.

¹⁷⁹ 174 S.W.3d 184 (Tenn. Ct. App. 2005).

However, where you establish wholly apart from such computations that you have sustained a loss, then you may offer your inventory records and actual physical count of inventory in support of the amount of loss claimed.

....

3. Insuring Agreements **A.3, A.4** and **A.5** do not apply to:

a. Accounting Or Arithmetical Errors Or Omissions

Loss resulting from accounting or arithmetical errors or omissions.¹⁸⁰

Similarly, the SAA's Crime Protection Policy, Exclusions D.1. and D.2. provide as follows:

D. EXCLUSIONS

Applicable to Specific Insuring Agreements

We will not pay for loss as specified below:

....

2. Under Insuring Agreements 1 and 5

Inventory Shortages

¹⁸⁰ ISO Form CR 00 23 07 02, *supra* note 11, Exclusion D.2.b. & D.3.a. (bold in original).

Loss, or any part of that loss, the proof of which as to its existence or amount is dependent upon:

- a. An inventory computation; or
- b. A profit and loss computation.¹⁸¹

Note that the policies do not permit the use of a profit and loss computation to support a claim.

Evidence can include a number of incidents, including, but not limited to:

- 1) Alteration of records¹⁸²
- 2) Getting caught in the act:

Evidence wholly apart from the inventory involving an employee being caught includes, but is not limited to:

- employee caught with inventory in their home, automobile, or on their person,
 - employee caught on video, or
 - employee seen stealing by coworkers or third parties, affidavits support the evidence submitted.
- 3) Evidence of theft provided by third parties

¹⁸¹ Crime Protection Policy SP 00 01 03 00 (March 2000) [hereinafter SAA Form SP 00 01 03 00], Exclusion D.1., *reprinted in* ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, at 669.

¹⁸² Fort Smith Tobacco & Candy Co. v. Am. Guarantee & Liab. Ins. Co., 208 F. Supp. 244, 264 (W.D. Ark. 1962) (court indicated the period and items [cigarettes] with altered records allowed the insured to collect for the cigarettes, but not for other missing items such as, drug, sundries, and appliances).

The evidence by third parties include pawn shop receipts, scrap yard receipts, eBay sales lists and UPS or FedEx delivery results.

When inventory is taken, the usual reason is to obtain cash unless the employee is using the inventory for personal enjoyment as often the case with drugs and lottery tickets.

The third party documentation is one of the best and valid documentations to overcome the concepts of neutrality and substance over form as detailed by the International Accounting Standards Committee Framework, paragraphs 36 and 38.¹⁸³

4) Evidence of the confession

Another form of evidence apart from inventory records, whether a computation or enumeration, is a confession or guilty plea by the employee. Unfortunately, often when the employee is confessing or writing statements, they are often done with overtures of the threats of calling the police or contacting the employee's family or friends.

A confession is often taken by criminal or ex-criminal professionals who lack professional skepticism or neutrality because of the relationship with the victim. While a dishonest person is not often believable, the facts and information they may present to an investigator after the first stress of the original confession are often worth considering and weighing when analyzing the reasonableness of the inventory computation or profit and loss calculation presented.

C. Reasonableness of Inventory Quantum Postulated and compared to evidence presented

When the use of inventory computation and profit loss calculations are contemplated, there is usually some independent evidence of employee involvement in dishonesty or fraud. A variety of the factors influencing the evidence should be considered to determine whether the inventory computation and profit and loss calculation is reasonable given the circumstances. An example of this arises where the quantity of goods the employee was arrested for stealing was relatively

¹⁸³ IFRSs, *supra* note 145, at 42.

small in relation to the quantity claimed by inventory records; the court refused to permit the use of inventory records (computations) to prove the amount of loss due to employee dishonesty.

The employee had been arrested while stealing four dresses valued at \$20, but the inventory records sought to establish loss of 3,595 garments over a seven-month period. In addition, the particular employee had only worked for the insured for the last two months of the seven-month period.¹⁸⁴ Common sense indicates that four dresses a day for 80 days are 320 dresses, at most.

The test of reasonableness of evidence offered in support of the reasonableness inventory computation include, but are not limited to:

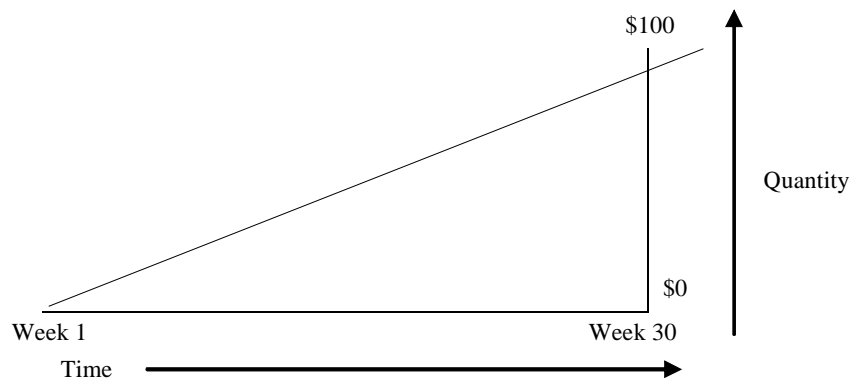
- 1) Frequency and Quantity
- 2) Triangulation
- 3) Horizontal Analysis
- 4) Vertical Analysis
- 5) Ratio Analysis

1) Tests of Frequency and Quantity are based on the evidence of a principal being caught stealing \$100 in lottery tickets in the last week of the employment. The employee may confess to the quantity stolen, be caught on video or there are witness statements. Taking the frequency of the employee attendance at work, for example 30 weeks. We could assume at a quantity of 100 tickets a week for 30 weeks is 3,000 tickets. Is this amount equivalent or reasonable to the claim submitted based on an inventory computation?

2) The Triangulation method is a furtherance of the Frequency and Quantity analysis. Common knowledge of employee theft is the quantity and frequency of theft by an employee increases over

¹⁸⁴ *Teviro Casuals, Inc. v. Am. Home Assur. Co.*, 439 N.Y.S.2d 145 (App. Div. 1981), *aff'd sub nom. Teviro Casuals Inc. v. Am. Home Assurance Co.*, 429 N.E.2d 830 (N.Y. 1981).

the period of loss. Using the same example above that the principal is caught with 100 lottery tickets in the last week of employment. The principal works for 30 weeks.



The employee is assumed to start at stealing zero tickets when employed and continues increasing the number of tickets sold. The calculation amount stolen is the area of the triangle, thereby utilizing the triangulation method:¹⁸⁵

$$\frac{1}{2} (L*H) = \frac{1}{2} (30 \times 100) = \$1,500$$

3) Horizontal Analysis is a comparison of ratios or line items in an entity's financial statement over a period of time. An example is for a convenience store; it is contended lottery sales are 10% of Total Sales:

¹⁸⁵ Mund & Studler, *supra* note 1, at 181.

Sales	Before Period of Loss	During Period of Loss	After Period of Loss
Lottery	\$100	\$80	\$100
All	1,000	1,000	1,000
Lottery as a percentage of sales	10%	8%	10%

It appears \$20 in sales is missing. The question is whether the sales monies are being stolen or the lottery tickets are being stolen? The evidence will support whether \$20 or \$20 less commissions to insured is paid.¹⁸⁶

Compare the results to the claimed inventory loss of lottery tickets to determine if the claimed inventory computation is reasonable. Remember to consider the cost conversion if lottery tickets are being stolen, instead of cash.

Horizontal analysis can also be used by comparing the results of different cashiers at the same convenience store. This same type of horizontal analysis can be used for cash theft. A cashier stealing cash and subsequently concealing, by various methods, may never get caught, unless the information is gathered, analyzed and actually understood. But given the current environment of too much information, and of understanding the information and purpose, is a reason employee theft often goes undetected.

Horizontal analysis looks at amounts, over time periods, on the financial statements over the past years. For example, the amount of cash reported on the balance sheet at December 31, 2006, 2005, 2004, 2003 and 2002 will be expressed as a percentage of the December 31, 2002 amount. Instead of dollar amounts you might see 134, 125, 110, 103, and 100. This shows that the amount of cash at the end of 2006 is 134 percent of the amount it was at the end of 2002. The same analysis

¹⁸⁶ The cost of the lottery ticket(s).

will be done for each item on the balance sheet and for each item on the income statement. This allows you to see how each item has changed in relationship to the changes in other items, over a period of time. Horizontal analysis is also referred to as trend analysis.

4) Vertical Analysis. Vertical Analysis is a method of financial statement analysis in which each entry for each of the three major categories of accounts (assets, liabilities and equities) in a balance sheet is represented as a proportion of the total account. The main advantages of analyzing a balance sheet in this manner is that the balance sheets of businesses of all sizes can easily be compared. It also makes it easy to see relative annual changes in one business.

For example, suppose XYZ Corp. has three assets: cash and cash equivalents (worth \$3 million), inventory (worth \$8 million) and property (worth \$9 million). If vertical analysis is used, the asset column will look like:

Cash and cash equivalents: 15%

Inventory: 40%

Property: 45%

This method of analysis contrasts with horizontal analysis, which uses one year's worth of entries as a baseline while every other year represents differences in terms of changes to that baseline.

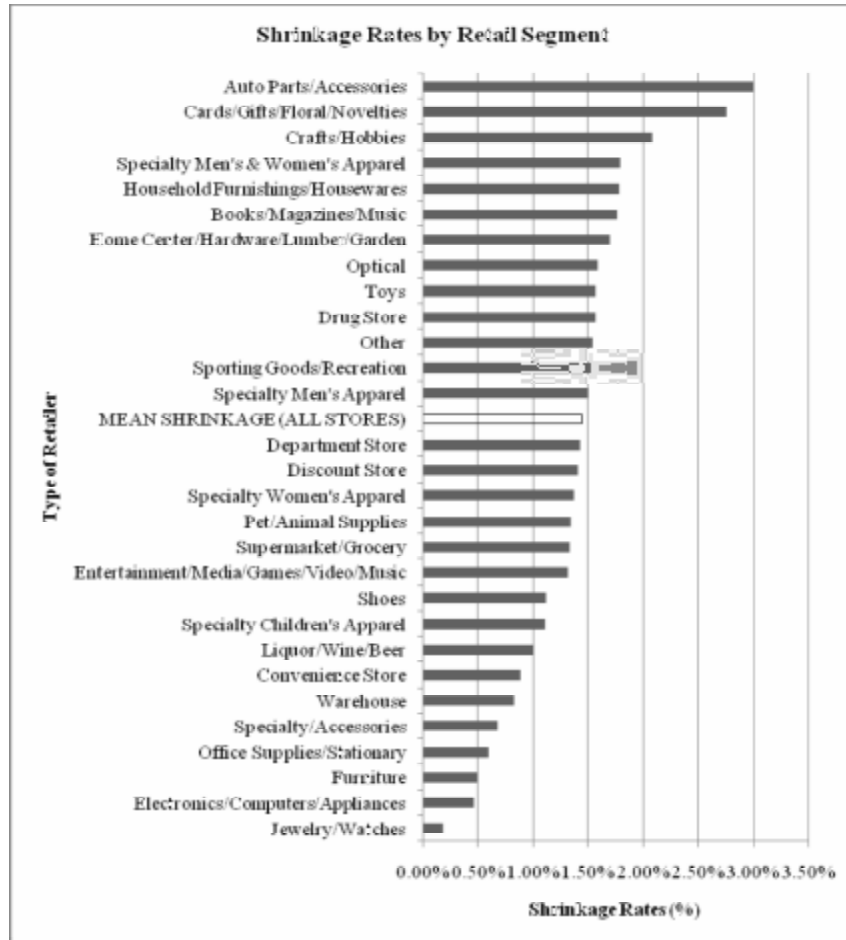
Vertical analysis reports each amount on a financial statement as a percentage of another item. For example, the vertical analysis of the balance sheet means every amount on the balance sheet is restated to be a percentage of total assets. If inventory is \$100,000 and total assets are \$400,000 then inventory is presented as 25 (\$100,000 divided by \$400,000). If cash is \$8,000 then it will be presented as 2 (\$8,000 divided by \$400,000). The total of the assets will not add up to 100. If the accounts payable are \$88,000 they will be presented as 22 (\$88,000 divided by \$400,000). If owner's equity is \$240,000 it will be presented as 60 (\$240,000 divided by \$400,000). The restated amounts from the vertical analysis of the balance sheet will be presented as a common-size balance sheet. A common-size balance sheet allows you to compare

your company's balance sheet to another company's balance sheet or to the average for its industry.

Vertical Analysis of an income statement results in every income statement amount being presented as a percentage of sales. If sales were \$1,000,000 they would be restated to be 100(\$1,000,000 divided by \$1,000,000). If the cost of goods sold is \$780,000 it will be presented as 78(\$780,000 divided by sales of \$1,000,000). If interest expense is \$50,000 it will be presented as 5(\$50,000 divided by \$1,000,000). The restated amounts are known as a common-size income statement. A common-size income statement allows you to compare your company's income statement to another company's or to the industry average.

5) Ratio analysis of goods for single item relationship to the inventory computation or profit and loss calculation. An example of a Ratio analysis is various industry averages indicating what normal shortage is expected to be. Thereby, if the inventory during the claimed period of loss is 10%, does the claim inventory shortage equate or justify the inventory computation submitted by the insured? Below are some common normal shortage rates for various retail operations:¹⁸⁷

¹⁸⁷ Security Research Project, *2007 National Retail Security Survey Final Report* (2007), available at <http://web.crim.ufl.edu/research/srp/srp.html>.



The ratio analysis for inventory computation is applied to determine the portion of the claim which is normal shortage. Normal shortage is what the entity expects to lose, without employee theft, due to reasons normal to operating a business, including breakage, shoplifting, misshipment or data entry errors.

Thus in summary, the accounting and investigative issues to be addressed include, but are not limited to whether the claim presented involves an inventory computation or an inventory enumeration, and whether the evidence presented supports employee theft or employee dishonesty. The accounting and investigation should also corroborate,

justify, substantiate, and verify whether the quantity is reasonable based on the postulated evidence presented. Using the tools and resources presented in this article should assist in determining, considering, and validating the reasonableness of the parameters and variables presented in each individual situation.

VII. ACCOUNTING ISSUES IN VALUATION

A typical example of the challenges and issues of actual cash value can be illustrated by the following example:

KY Construction Company recently purchased a large historical building. They are refurbishing it in a local municipality under the historical landmark guidelines. The building has been vacant for approximately thirty days and it is estimated it will take six months to efface, upgrade, and refurbish the building.

Lengthy investigation determined that during a long holiday weekend, a group of employees stripped the entire building of all metal, steel, and copper they could seize to be sold as scrap at the local scrap yard. Some of the items destroyed and scrapped included, but were not limited to: two entire cooling towers on the roof; all piping, including copper and cast iron; all guard rails in the parking garage; and all copper electrical wires which could be accessed and pulled between floors.

The insured purchased the building for approximately \$300,000.00. The plans for refurbishing and contract bids for the work called for an expense to upgrade wire and piping at approximately \$60,000.00.

After the destruction and removal of the wire and piping, the cost to replace the damaged property (wire, piping, HVAC) was estimated to be approximately \$450,000.00.

It was estimated that the scrap value for the stolen metals was approximately \$80,000.00 to \$90,000.00. As indicated by the policy's conditions:

- (1)** The value of any loss for purposes of coverage under this policy shall be determined as follows:

....

- (c)** Loss of or damage to “other property” or loss from damage to the “premises” or its exterior for the replacement cost of the property without deduction for depreciation. However, we will not pay more than the least of the following:

- (i)** The cost to replace the lost or damaged property with property of comparable material and quality and used for the same purpose;
- (ii)** The amount you actually spend that is necessary to repair or replace the lost or damaged property; or
- (iii)** The Limit of Insurance applicable to the lost or damaged property.

With regard to Paragraphs **y.(1)(c)(i)** through **y.(1)(c)(iii)**, we will not pay on a replacement cost basis for any loss or damage:

- i.** Until the loss or damaged property is actually repaired or replaced; and
- ii.** Unless the repairs or replacement are made as soon as reasonably

possible after the loss or damage.

If the lost or damaged property is not repaired or replaced, we will pay on an actual cash value basis.

- (2) We will, at your option, settle loss or damage to property other than “money”:
 - (a) In the “money” of the country in which the loss or damage occurred; or
 - (b) In the United States of America dollar equivalent of the “money” of the country in which the loss or damage occurred determined by the rate of exchange published in *The Wall Street Journal* on the day the loss was “discovered.”¹⁸⁸

The policy indicates it will pay replacement cost of property without deduction for depreciation when property is actually repaired or replaced, and the repairs or replacement are made as soon as reasonably possible after the loss. If the property is not repaired or replaced, the policy pays Actual Cash Value.¹⁸⁹

Determining ACV involves two components: nature of the property and jurisdiction of the property. ACV has four prevalent denotations:

- a) market value,
- b) replacement cost less depreciation,

¹⁸⁸ Commercial Crime Policy (Loss Sustained Form) CR 00 23 05 06 (May 2006), Condition E.y.(1) & (2), *reprinted in* ANNOTATED COMMERCIAL CRIME POLICY, *supra* note 2, 651 (bold and italics in original).

¹⁸⁹ Hereinafter ACV.

- c) broad evidence, and
- d) value to the insured.

The broad evidence rule “required the fact finder to consider all the evidence an expert would consider relevant to an evaluation;” and particularly both for market and replacement cost less depreciation.¹⁹⁰

Under the broad evidence rule, the two methods of fair market and replacement value do not bind the fact finder, but are guidelines. The fact finder may contemplate and compare other methodologies he believes are appropriate.

In *Interstate Gourmet Coffee Roasters, Inc.*,¹⁹¹ the court held ACV under Broad Evidence Rule would apply, and found the “actual cash value” for 16,000 lbs. of contaminated coffee was selling price less incurred expenses for packaging and delivery. This case is a property loss case, whereas, most crime forms have an indirect loss exclusion:

d. Indirect Loss

Loss that is an indirect result of any act or “occurrence” covered by this policy including, but not limited to, loss resulting from:

- (1) Your inability to realize income that you would have realized had there been no loss of or damage to “money,” “securities” or “other property”.¹⁹²

Thus, the selling price less incurred expense would not be an appropriate alternative method under the crime form in any jurisdiction. The fact finder most likely would consider using the variable

¹⁹⁰ Pinet v. New Hampshire Fire Ins. Co., 126 A.2d 262, 265 (N.H. 1956).

¹⁹¹ 794 N.E.2d 607 (Mass. App. Ct. 2003).

¹⁹² ISO Form CR 00 23 07 02, *supra* note 11, Exclusion D.1.d. (bold in original).

manufacturing expenses incurred to replace the \$16,000.00 lbs. of coffee, thus not including any indirect costs or profit.

Fair Market Value is generally defined as the price a willing buyer would pay a willing seller. The difficulty arises when there is no “market” to value the property. In which case, the actual cost value may include the property’s intrinsic value to the insured or the loss the insured suffers in being deprived of the property.¹⁹³ However, any loss of profit, any financial or sentimental considerations would be excluded in the crime forms.¹⁹⁴

As indicated above, the policy suggests alternative valid calculations, and actual cash value, restoration, repair or replacement. Are these values the same? In *Travelers Indemnity Co. v. Armstrong*,¹⁹⁵ actual cash value is intended to make the insured whole, not improve the insured’s position. Whereas, the replacement cost reimburses the insured for cost of repair or replacement even if the insured is thereby put into a better position than if no loss had occurred.¹⁹⁶

Using Replacement Value less depreciation to calculate an ACV is another approach. However, to consider using this method involves determining the components of replacement value.

In the example of our building stripped of all metal, contractors will be needed to replace the wire and piping. Many jurisdictions have held the contractor’s overhead and profit must be included in the replacement calculation, as long as the contractor would normally be used to repair the damage.¹⁹⁷

The second part of the ACV calculation is to deduct depreciation. Depreciation represents the amortization of the value of the property over the lifespan of the property.

¹⁹³ *Third Nat. Bank v. Am. Equitable Ins. Co. of New York*, 178 S.W.2d 915, 924 (Tenn. Ct. App. 1943).

¹⁹⁴ *Crisp v. Sec. Nat. Ins. Co.*, 369 S.W.2d 326, 329 (Tex. 1963).

¹⁹⁵ 442 N.E.2d 349 (Ind. 1982)

¹⁹⁶ *Id.* at 352.

¹⁹⁷ *Mee v. Safeco Ins. Co. of Am.*, 908 A.2d 344, 348 (Pa. Super. Ct. 2006).

“Depreciation is the allocation of the historical cost of a fixed asset into expense over the period benefited to result in matching expense against revenue. Fractional year depreciation is computing depreciation when the asset is acquired during the year. A proration is required.”¹⁹⁸

Note, this is not always reflective of the value when using the Broad Evidence.¹⁹⁹

The Depreciation Process

The Depreciation Process for long-term assets comprises three separate factors:

1. Establishing the proper depreciation base.
2. Estimating the useful service life.
3. Choosing a cost apportionment method.

Depreciation Base

The depreciation base is that portion of the cost of the asset that should be charged to expense over its expected useful life Hence, it should be cost minus the present value of the salvage value. In practice, salvage value is not discounted, and as a practical matter, it is typically ignored. Proper accounting treatment requires that salvage value be taken into consideration. For example, rental car agencies normally use automobiles for only a short period; the expected value of these automobiles at the time they are retired from service would be material and should be considered in establishing the depreciation base.

¹⁹⁸ JAE K. SHIM & JOEL G. SIEGEL, ENCYCLOPEDIA OF ACCOUNTING AND FINANCE 146 (1989).

¹⁹⁹ SCHROEDER ET AL., *supra* note 153, at 282.

Useful Service Life

The useful service life of an asset is the period of time the asset is expected to function efficiently. Consequently, an asset's useful service life may be less than its physical life, and factors other than wear and tear should be examined to establish the useful service life. . . For example, jet airplanes have replaced most of the airlines' propeller-driven planes, and ecological factors have caused changes in manufacturing processes in the steel industry. Estimating such factors requires a certain amount of clairvoyance—a quality difficult to acquire.

Depreciation Methods

Most of the controversy in depreciation accounting revolves around the question of the proper method to use in allocating the depreciation base over its estimated service life. Theoretically, the expired cost of the asset should be related to the value received from the asset in each period; however, it is extremely difficult to measure these amounts. Accounts have, therefore, attempted to estimate expired costs by other methods, namely:

1. Straight line
2. Accelerated
3. Units of Activity

An example drawn from the experience of one of the authors is helpful. An industrial metal forming press was used to create World War II ship hulls and is more recently used to create NASA shuttle hulls. The press may, 50 years after World War II, have a zero book value on the books and records of the insured. However, it has a significant value when the current replacement value less the amount of depreciation or amortization on the books and records. The language in the crime policy caps actual cash value to an amount that cannot exceed what it would cost to repair or replace.

To obtain and review the various possible components of ACV valuations, documents may include:

- 1) purchase contracts,
- 2) fixed asset schedules with tax returns,
- 3) depreciation schedules with tax returns,
- 4) depreciation worksheets,
- 5) fixed asset general ledgers or subsidiary ledgers,
- 6) bill of materials,
- 7) production costs,
- 8) major improvements and life expectancy changes
- 9) loan documents and collateral worksheets,
- 10) invoices,
- 11) supplier inquiries,
- 12) bids and proposals,
- 13) capital estimation worksheets,
- 14) depreciable base worksheets, and
- 15) residual value worksheets.

As to the example of the building stripped of metal, in determining the value to consider, it is important to understand whether the insured is going to repair the building or destroy the building. If our insured demolishes the building, the insured could have obtained \$80,000.00 to \$90,000.00 in scrap value themselves, as such, it was stolen.

If the insured repairs and replaces, the cost is approximately \$250,000.00. However, in the replacement are repair costs are upgrade costs of approximately \$60,000.00. Thus, those are not in the cost to replace with like kind. A deduction or credit should be considered for a total replacement or repair of \$390,000.00.²⁰⁰

Replacement value is a fairly recent addition to crime policy. It may result in over indemnification and thus the availability of this measure will have to be carefully scrutinized under the particular form. Whatever the circumstances, the fact finder for crime policies will need to be cognizant of the indirect costs, including, but not limited to, manufacturing overhead, rent, supervisory labor cost, and profit exclusions when determining replacement values and actual cost values.

VIII. CONCLUSION

Losses involving alleged employee theft of inventory are fraught with a surprising amount of legal, factual and accounting complications. Resolution of these claims can be facilitated by adopting a methodical approach to the claim.

First, determine the wording of the inventory and profit and loss computation exclusion at issue.

Next, determine the legal construction the jurisdiction in question will place upon the subject policy.

Educate the insured as to the practicalities involved in the investigation, analysis and resolution of such claims, including the potential role off the inventory computation exclusion. Carefully investigate the persons, methods and instrumentalities by which the thefts are claimed to be perpetrated. Determine from an a factual and accounting viewpoint whether the fact and amount of the loss directly resulting from employee theft makes logical sense.

Finally, if computational evidence is appropriate and permitted, determine what quantum of loss is sensible and appropriate.

²⁰⁰ \$45,000—\$60,000.

These inquiries are necessarily fact intensive and will often involve significant field work and in appropriate claims, involvement of outside professionals. Particular care needs to be taken to keep the insured informed of the issues presented by the claim. This will often help facilitate the investigation and help the insured to have more appropriate expectations regarding the claim resolution.