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The Economics and Perplexing Utah Law of Prejudgment Interest

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Injured parties have sought monetary damages for a very long time. In some cases, these damages are immediate and one-time; for example, an automobile wreck that totals a car but results in no other harm, or the failure to deliver a consumable to a firm on a particular date with the corresponding loss in profits on that date. In other cases, the damages are prospective and, often, ongoing; for example, an automobile wreck that interferes with the injured party's ability to work for a period of time after the wreck or the failure to deliver a machine that reduces a firm's future profits. Though in either of these settings there is virtually always a delay between when an injury occurs and when a final judgment is entered, surprisingly, courts continue to struggle with how to deal with the lapse of time between injury and final judgment when awarding damages.

Delay between the date when an injury either occurs or begins and the date of final judgment creates a history in the sense that events occur between the two dates that may affect the parties. One element of this history is straightforward: Compensation occurs after injury. As a consequence, a critical issue in litigation is whether, in making the injured party whole, there should be compensation for this delay, specifically, whether prejudgment interest should be awarded. Presumably, the purpose of prejudgment interest is to compensate for the declining value over time of the amount owed (the damage award).[1] Despite this straightforward purpose, the law of prejudgment interest in Utah is anything but straightforward. The following simple example illustrates but one problem with Utah law: A creditor loans $100, with the loan to be paid back in one year. If the debtor does not repay the loan, the creditor will lose the opportunity to earn interest on that $100 during the period of time when the borrower is delinquent. In addition, the creditor will also lose the opportunity to earn interest on the $100 while the dispute over repayment is adjudicated. Given that one of the primary goals of damages in contracts is to place injured parties in the same position they would have been in

[1] Encon Utah, L.L.C. v. Fluor Ames Kraemer, L.L.C., 210 P.3d 263, 275 (Utah 2009).

had the breach not occurred,[2] courts will generally award interest on the $100 from the time of the breach to the date of judgment. Including pre-judgment interest in damages in this simple example is straightforward and not controversial under Utah law. However, changing the cause of action results in the injured party not being eligible for prejudgment interest. For example, if the damages were caused by a tort such as defamation, and the injured party spent $100 salvaging his reputation after the defamatory act, prejudgment interest would not be awarded.[3] The different outcomes in these two scenarios are not specific to the examples: In Utah, the prejudgment interest for which an injured party is eligible depends upon the type of claim or injury, even if the same amount is lost.[4] It is these types of inconsistencies, which run afoul of basic economic principles, that are the subject of this Article.

The law has long recognized that some grasp of economic principles is required to properly fashion damage rules that accurately compensate injured plaintiffs.[5] Economists are typically qualified to provide judges and juries with expert testimony on this topic, and economic analysis, often filtered through law review commentaries, has long guided the jurisprudence in this area.[6] Moreover, the conceptual issues that arise in damage analysis have many parallels with problems with which economists have grappled for a long time. The issue of delay between an event and a later payment is precisely one of these long-studied economic issues. Accordingly, our analysis of how Utah law deals with delay is informed by substantive economic understanding and methodologies.[7]

In Part I, we discuss the role of time in the calculation of damages and set forth three simple economic principles that inform our subsequent analysis of Utah law. Part II describes the determination and application of prejudgment interest that would be consistent with these economic principles. Part III outlines how Utah courts award prejudgment interest. We show that Utah's approach violates basic economic principles and undermines the well-defined purposes for awarding prejudgment interest. A short conclusion follows as Part IV.

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[2] Michael S. Knoll & Jeffrey M. Colon, *Prejudgment Interest*, *in* LITIGATION SERVICES HANDBOOK: THE ROLE OF THE FINANCIAL EXPERT 9.1, 9.2 (Roman L. Weil et al. eds., 4th ed. 2007).

[3] Fell v. Union Pac. Ry. Co., 88 P. 1003, 1006 (Utah 1907) (stating that prejudgment interest is not allowed in cases of libel, slander, false imprisonment, malicious prosecution, assault and battery, and others).

[4] *Compare* UTAH CODE. ANN. § 15-1-1 (West 2009) (setting prejudgment interest for contract damages at 10%), *with* UTAH CODE ANN. § 78B-5-824 (West 2008 & Supp. 2011) (setting prejudgment interest rate for personal injury damages at 7.5%).

[5] *See* ROBERT COOTER & THOMAS ULEN, LAW & ECONOMICS 253 (6th ed. 2012).

[6] Peter B. Frank et al., *The Role of the Financial Expert in Litigation Services*, *in* LITIGATION SERVICES HANDBOOK, *supra* note 2, at 1.4.

[7] COOTER & ULEN, *supra* note 5, at 1 ("Economics is the most advanced of the social sciences, and the legal system contains many parallels to and overlaps with the systems that economists have studied successfully." (citation omitted)).

I. TIME AND THE CALCULATION OF DAMAGES

Justice is always delayed in the sense that damages are never awarded immediately after one party engages in, or fails to take, an action that creates liability. Adjudication takes time. There is always a gap between the date of injury ("T_0") and the date of final judgment ("T_j").[8] The matter is typically more complicated, however, because while damages may begin at T_0, they may also continue into the future, even after T_j. It is well settled that damages are a sum-certain at the date when there is a final judgment on the matter.[9] It follows that because of delay, a sum-certain damages award has three components: (1) the compensable harm at the time the wrongful action occurred ("immediate harm"); (2) the compensable harm that occurred after the wrongful action, but before final judgment ("once prospective, but now historical harm"); and (3) the compensable harm that occurs after the wrongful action, but which remains prospective at the date of final judgment ("yet-to-be-realized harm").

In determining sum-certain compensation when a final judgment is entered, time plays an important role. It does so for two reasons: First, the delay between when liability was triggered and final judgment is entered leaves the plaintiff uncompensated for a period of time. Second, in those cases when there is harm extending beyond the date of final judgment, the plaintiff is compensated at the time of final judgment for yet-to-be-realized harm that will only occur over time in the future. In this Article, we explore the Utah law that addresses the first of these reasons, the remedy for delay between liability and judgment that is generally termed "prejudgment interest." However, for reasons that will become clear, any exploration of prejudgment interest requires some consideration of the second reason. Specifically, how courts deal with the remaining prospective harm after a

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[8] For expositional convenience, we use the following notations:

Variable	Meaning
R	Discount rate
r	Prejudgment interest rate
T_0	Date of wrongful action
T_j	Date of final judgment
D_j	Damages
H_0	Immediate damages at time of wrongful action
H_i	Harm at a given time, T_i, caused by wrongful action where T_i denotes a given date sometime after the date of the wrongful action. T_i could denote a date between the T_0 and T_j or it could denote a date after T_j.

[9] *See, e.g.*, Albright v. UNUM Life Ins. Co. of Am., 59 F.3d 1089, 1092–93 (10th Cir. 1995).

sum-certain final judgment is entered can affect, explicitly or implicitly, the amount of prejudgment interest awarded to the plaintiff. We also show that the way once prospective but now historical harm is treated under the law can affect the dollar amount of prejudgment interest awarded.[10]

A. Applicable Economic Principles

It is settled legal doctrine that the goal of awarding damages is to place an injured party in the monetary situation he would have been in had the wrongful act not occurred—"to make the plaintiff whole."[11] This objective compels damage experts to construct a "but for" scenario; that is, a hypothetical situation the plaintiff would be in had the wrongful act not happened. Damages can then be calculated as the monetary value that the plaintiff would have achieved in a but-for world *less* the actual money received in the actual world where the wrongful act occurred.[12] This difference is precisely what the plaintiff lost due to the wrongful act. To be admissible, the construction of a but-for world must use information and rely on assumptions that are "reasonably certain."[13] Moreover, the calculation of damages must be in accord with accepted economic theory and principles and be consistent with the facts of the case.[14] An admissible adjustment of damages for time has to meet these conditions. In particular, damages that occur at different moments in time cannot be summed.[15] Prejudgment interest should also meet these conditions and, in addition, meet the goal of making the plaintiff whole with respect to the impact of delay.[16]

Three simple, but powerful, economic principles apply to damages: First, a "dollar is a dollar"—the source of a dollar payment should not matter to a recipient. Second, a "dollar today is worth more than a dollar tomorrow."[17]

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[10] By this we mean future harm that is discounted back to some historical date prior to T_j.

[11] Konrad Bonsack, *Damages Assessment, Janis Joplin's Yearbook, and the Pie-Powder Court*, 13 GEO. MASON L. REV. 1 (1990).

[12] Robert Hall & Victoria Lazear, *Reference Guide on Estimation of Economic Losses in Damages Awards*, *in* REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 277, 281 fig.1 (Federal Judicial Center 2d ed. 2000).

[13] *See* Restatement of Contracts, Second, Section 352. *See also* UTAH R. EVID. 702; State v. Rimmasch, 775 P.2d 388, 395–400 (Utah 1989).

[14] UTAH R. EVID. 702; Eskelson v. Davis Hosp. & Med. Ctr., 242 P.3d 762, 765–66 (Utah 2010); *Rimmasch*, 775 P.2d at 395–400.

[15] Adding dollars realized at different dates in time is akin to the old saw about adding apples and oranges. The *present value* (where "present" is a specific date) of dollars realized at different dates can, however, be added. *See, e.g.*, JAMES R. KEARL, ECONOMICS AND PUBLIC POLICY: AN ANALYTICAL APPROACH 413–38 (6th ed. 2011).

[16] *See* Knoll & Colon, *supra* note 2, at 9.2.

[17] *See* RICHARD A. BREALEY & STEWART C. MYERS, PRINCIPLES OF CORPORATE FINANCE 12 (5th ed. 1996); *see also* RICHARD A. DEFUSCO ET AL., QUANTITATIVE METHODS FOR INVESTMENT ANALYSIS 2 (2001); SHANNON P. PRATT, COST OF CAPITAL:

Conversely, dollars lost in the past are worth more than current dollars.[18] Third, a "risky dollar is worth less than a for-certain dollar" or, more generally, higher risk dollars are "worth" less than lower risk dollars.[19]

There are four drivers of these three principles: The first is the perfect fungibility of money. Since the use of one dollar cannot be distinguished from another dollar, the value of a dollar to an individual comes from what it can be used for, not its source. The second driver is the time value of money. Individuals inherently prefer to buy things "today" (i.e., in the present) rather than to save and buy things at a later date, and so must be compensated to reduce current spending and save for the future.[20]A third driver is the possibility of inflation. If there is inflation, individuals have to be compensated for the expected decline in the purchasing power of a dollar should they choose to save or otherwise defer consumption.[21] In markets, the sum of the compensation for waiting and for inflation corresponds to the "risk-free nominal interest rate" or, more descriptively, the "rate of return on risk-free assets in a world where inflation is anticipated."[22] The fourth driver is that individuals are generally averse to risk. Individuals who are risk averse have to be compensated for bearing risk if future payments or deferred consumption are uncertain.[23] In markets, the sum of the compensation for waiting, inflation, and risk corresponds to the "rate of return on assets with particular, specific, risks." If essentially risk-free assets are available (for example, short-term Treasury bills), then individuals will only hold risky assets if the expected returns on those assets are greater than those on risk-free assets.[24]

ESTIMATION AND APPLICATIONS 5–6 (1998) (stating that future dollars must be discounted to represent their future value).

[18] *See* Knoll & Colon, *supra* note 2, at 9.2 (stating interest must be added to past dollars to represent their future value).

[19] *See* ZVI BODIE ET AL., INVESTMENTS 133 (4th ed. 1999); BREALEY & MYERS, *supra* note 17, at 13 ("[A] safe dollar is worth more than a risky one.").

[20] *See* DEFUSCO ET AL., *supra* note 17, at 2. In markets, the necessary compensation for waiting corresponds to the "real interest rate" or what might be termed the "rate of return on risk-free assets in a world without inflation." *See* BODIE ET AL., *supra* note 19, at 128, 133.

[21] *See* Gaurav Jetley et al., *Estimating the Cost of Capital*, in LITIGATION SERVICES HANDBOOK, *supra* note 2; PRATT, *supra* note 17, at 5.

[22] *See* BODIE ET AL., *supra* note 19, at 128, 133, 138–40; DEFUSCO ET AL., *supra* note 17, at 2. Widely held views about the rate of inflation—"expected inflation"—will be built into the nominal interest rate: for example, if the risk-free real rate of interest is 4% and the expected rate of inflation is 3%, then the risk-free nominal rate of interest will be 7%. *Id.* at 128, 138–40.

[23] *See* R.F. Lanzillotti & A.K. Esquibel, *Measuring Damages in Commercial Litigation: Present Value of Lost Opportunities*, 5 J. ACCT. AUDITING & FIN. 125, 130 (1990) ("Since damages for future lost profits should not include the amount of the risk premium, the plaintiff's award should be calculated using the cost of capital adjusted to the risk of the project.").

[24] BODIE ET AL., *supra* note 19, at 133.

Likewise, individuals will only hold assets whose returns are subject to greater risk if the expected returns are greater than those on assets whose returns are subject to lower risk.[25] Below we use these fundamental economic principles to address the issue of prejudgment interest.

B. *The Effects of Time on Prejudgment Interest*

There are a number of ways in which time affects prejudgment interest. These issues can be framed by considering a few simple diagrams. For purposes of discussion, we let R be the interest rate used to discount prospective harm that occurs after the date of defendant's action that created liability (T_0).[26] Hence, if damages were awarded immediately following the defendant's wrongful action, then they would have two elements: immediate harm (H_0) and prospective harm (H_1, H_2, etc.) discounted to T_0 at rate R. Since adjudication takes time, however, final judgment will be entered T_j and not T_0, per the following diagram.

Figure 1
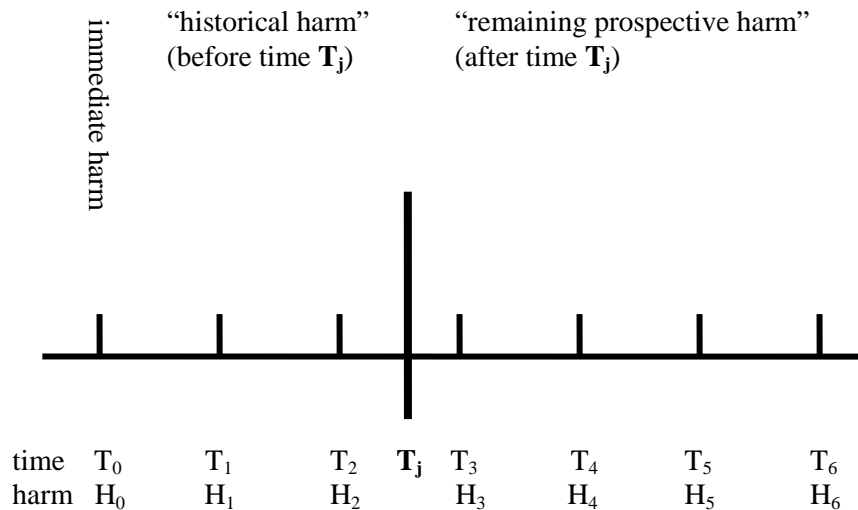
At T_j, courts must now address three damage components: H_0, immediate harm for which there has not yet been compensation; harm that was prospective at T_0 but is historical at T_j (i.e., the harm realized between T_0 and T_j); and harm that was prospective at T_0 which remains prospective at T_j (i.e., at periods after T_j). Clearly, if prejudgment interest (for purposes of discussion denoted as "r") is to be applied, it should be applied to H_0. It is much less clear, however, how prejudgment interest should be applied to "historical harm" (before T_j, e.g., H_1 and H_2). Moreover, how

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[25] *Id.* at 155, 187.

[26] Hereafter, H_i denotes the harm at time T_i, where i indexes future dates or periods.

the "remaining prospective harm" (after T_j, e.g., H_3, H_4, H_5, and H_6) is handled also can affect, at least implicitly, the prejudgment interest that is awarded. That is, aside from the issue of compensating the plaintiff for the delay associated with a payment for the immediate harm, delay turns what would have been prospective into history—the unrealized becomes realized—and, it would appear, delay shortens the period over which the remaining prospective damages occur. As more time passes between the dates of injury and final judgment, the relative size (or duration) of the three categories of harm changes.[27]

There are two methods to address "historical harm" that "normalizes" harm values that occur at different times (or periods): Discount H_1 and H_2 to T_0 using R (the discount rate) and then bring the sum of H_0 plus the now discounted H_1 and H_2 forward to T_j using r (the prejudgment interest rate). Alternatively, separately bring H_0, H_1, and H_2 forward to T_j using r.[28] These possibilities are illustrated in the next diagram:

Figure 2

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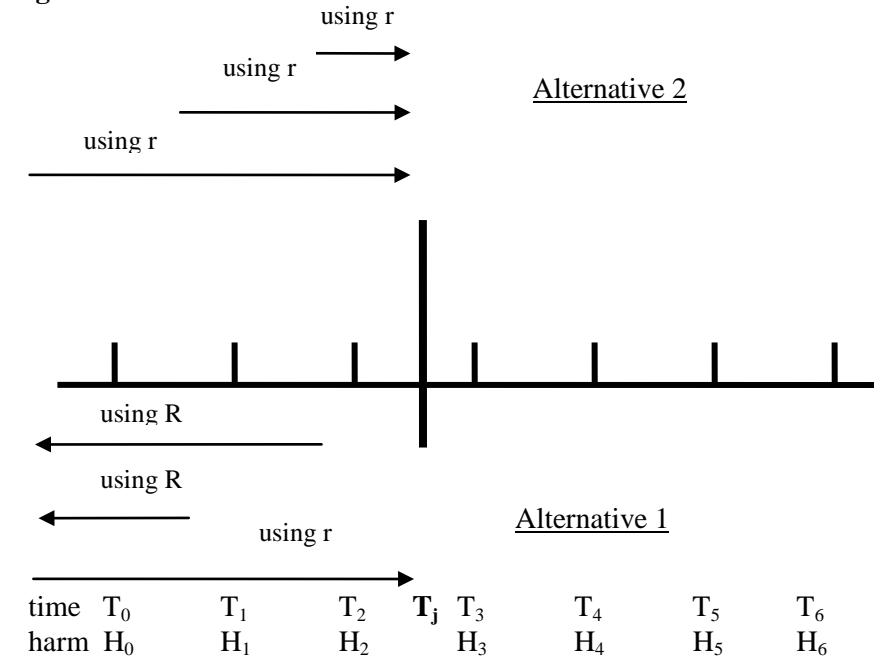
[27] This change in size creates an incentive, in certain cases, to game the system by attempting to move the trial date to maximize damages depending on when the majority of damages are suffered. We briefly discuss these incentives in Part IV.

[28] Since damages that occur at different moments in time cannot be summed, there are two ways that sum-certain damages can be derived: damages at different points in time can brought back to an earlier date and by reducing their value ("discounting") and then summing the discounted figures; or damages at different points in time can be brought forward to later date by increasing their value ("bringing forward" or "compounding") and then summing the compounded figures.

As a practical matter, Alternative 2 can yield substantially larger sum-certain damages at T_j than Alternative 1 depending on the size of the difference between R and r. For example, if the plaintiff's losses are $1 million immediately and $1 million in each of the following years, if final judgment occurs three years after the harm occurred, and if R = .2 and r = .03,[29] then Alternative 1 yields damages of $2,713,675 while Alternative 2 yields damages of $3,183,600—nearly 18% higher, even though nominal damages are "equal". At a more abstract level, Alternatives 1 and 2 embed very different assumptions about risk and uncertainty.

There are also two possible methods to calculate the "remaining prospective damages": Discount H_3, H_4 . . . to T_0 using R (a discount rate) and then bring the sum of the discounted values, plus H_0, forward to T_j using r (the prejudgment interest rate); or, discount H_3, H_4 . . . to T_j (the date of final judgment) using R and add to this component of damages the value at T_j determined by either Alternative 1 or Alternative 2 in Figure 1 for H_0, H_1 and H_2. These possibilities are illustrated below.[30]

Figure 3

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[29] The values of R and r are assumed for this hypothetical.

[30] To keep the diagram relatively uncluttered, we've illustrated only discounting some "remaining prospective harm." In actually determining damages at T_j, all "remaining prospective harm"—which might extend into the indefinite future—would have to be discounted to T_0 (Alternative 3) or T_j (Alternative 4).

We summarize these alternatives as follows:

Treatment of Historical Damages	
Alternative 1	Discount historical damages to the date of the wrongful action using the discount rate, R. Then bring that sum forward using the prejudgment interest rate, r.
Alternative 2	Bring historical damages forward to the date of final judgment separately using the prejudgment interest rate, r.
Treatment of Prospective Damages	
Alternative 3	Discount prospective damages to the date of the wrongful action using the discount rate, R. Then bring that sum plus initial damages forward using the prejudgment interest rate, r.
Alternative 4	Discount prospective damages to the date of the final judgment using the discount rate, R. Then add this total to the historical damages calculated using either Alternative 1 or Alternative 2.

Again, as a practical matter, Alternative 4 will generally yield substantially higher damages than will Alternative 3. For example, if $R = .2$, then \$1 million in prospective damages five years from T_j would be a sum-certain of \$401,881 at T_j. By contrast, if T_j is four years after T_0 and the same \$1 million in prospective damages is discounted to T_0 rather than T_j and then brought forward to the time of final judgment, T_j, at $r = .03$, the contribution to sum-certain damages at would be \$218,230. For these values of R and r, the approach illustrated as Alternative 4 yields damages at T_j that are nearly twice the size of damages that would be awarded if the approach in Alternative 3 is adopted.

This difference in awarded damages is essentially arbitrary with regard to the actual harm caused by a wrongful action. Both immediate and prospective damages are determined by the actions of the defendant that triggered liability (in this example, a \$1 million loss nine years from the date of injury). The damages came into being when the defendant undertook, or failed to undertake, some action on a specific date. By contrast, the date of final judgment is arbitrary.[31] This means that the distinction between losses that are "historical" and "prospective at the time of final judgment" is also arbitrary in that it is an artifact of delay—delay shifts losses from "prospective" to "historical." As a result, any distinction between the two with regard to prejudgment interest is also arbitrary. It also means that the date of final judgment, which is essentially arbitrary with regard to the date of injury

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[31] To the degree that either plaintiff or defendant has an incentive to delay, the date of final judgment may not be completely arbitrary. *See infra* Part IV.

and the date when, in the future, harm will occur, can dramatically affect the damages that are awarded.

C. Historical and Prospective Damages

While the focus of this Article is on prejudgment interest, it should be clear that the prejudgment interest award in Alternatives 1 and 3 depends on how courts deal with historical and prospective damages. Though it is less clear, this is also the case with Alternative 4 because of the rate of R. Hence, in this section we briefly discuss the discount rate, R.

There is very little, if any, legal guidance in Utah or elsewhere with regard to dealing with prospective damages beyond general findings that they cannot be "too speculative."[32] Indeed, even the question of whether the discount rate (R) should reflect uncertainties about prospective, yet-to-be realized damages is largely unresolved.[33] Because individuals are risk averse,[34] however, risky dollars are worth less than for-certain dollars.[35] This is reflected in markets where to compensate for risk, higher-risk activities have higher expected returns.[36] A sum-certain judgment is, however, just that: a specific amount of money awarded on a specific date. Hence, to make a plaintiff whole, risky dollars have to be converted to "certainty-equivalent" or "risk-free" dollars.[37] While this is a general principle equally applicable to damages for personal injury and business losses, we explore the reasons why sum-certain judgments should account for risk in a business setting.

A person developing a project typically must make investment expenditures or outlays before any profits can be realized. That is, the timing of virtually any business opportunity requires for-certain expenditures "now" with only uncertain returns in "the future." For example, suppose a building costs $1 million and, once

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[32] This standard is developed in somewhat more detail below. *See infra* note 47 and accompanying text.

[33] We are not implying that courts or legislatures ought to set a specific risk-adjusted discount rate, but, for reasons detailed immediately below, it seems odd that courts have not settled the question about whether the parties have to deal in an explicit way with the inherent uncertainty associated with prospective damages.

[34] *See* WALTER NICHOLSON, MICROECONOMIC THEORY: BASIC PRINCIPLES AND EXTENSIONS 538–42 (9th ed. 2005).

[35] PRATT, *supra* note 17, at 37 ("As the market's perception of the degree of risk of an investment goes up, the rate of return that the market requires (the discount rate) goes up."). Economists measure risk aversion by the curvature of the utility function with respect to wealth.

[36] *See* BODIE ET AL., *supra* note 19, at 137 ("Riskier assets have provided higher expected returns . . . .").

[37] *See* Lanzillotti & Esquibel, *supra* note 23, at 130 ("Since damages for future lost profits should not include the amount of the risk premium, the plaintiff's award should be calculated using the cost of capital adjusted to the risk of the project.").

finished, the developer *expects* (but does not know for certain) that she can sell it for $1.5 million, generating nominal profits of $500,000. Because she has to construct the building before it can generate profits, the expenditure is *for certain*, but the revenue from selling it and, hence, the profits are *uncertain*: by the time the building is finished, real estate prices may have declined or not increased as much as expected.[38] As a consequence of such uncertainty, the $1 million expenditure in hopes of earning $500,000 in profits is a risky bet. Since people are risk averse, a rational investor would account for these risks in making a decision about whether to spend the $1 million to build the building. If the risks associated with the expected, but uncertain, profits increased, a person willing to spend $1 million when the risk was less would be less willing to spend the $1 million when the risk was greater. More generally, the greater the risks, the less a person will value the possibility of getting $500,000 at some point in the future. For these reasons, a person will discount (in the common-sense meaning of the word) the possible $500,000 profit for the risks that, having spent $1 million, the building may not actually sell for $1.5 million.[39]

It is well established in economics and finance that the way to handle this kind of response to risk is to discount (in a formal, technical way) the expected, but uncertain, future profits using a discount rate that accounts for a reasonable estimate of the risks associated with the "$1 million now; perhaps $1.5 million in the future" bet.[40] While courts have been slow to come to this view, accounting for risk through discounting is *the* accepted methodology in financial economics.[41] The authors of a well-known and well-regarded text write:

> Long before the development of modern theories linking risk and expected return, smart financial managers adjusted for risk in capital

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[38] There will also be risks associated with the expected cost to build the structure. For example, it may be that the costs of building increase over the course of the construction project so that it actually costs $2 million to complete the building, but expectations with regard to the selling price of the building ($1.5 million) are unchanged. Or it may be that it takes longer than anticipated to complete the building and, hence, the expected profits are delayed, etc. These possibilities—that costs change and that there are delays—also make the future expected profits risky because, again, the changed costs to complete the building must be incurred *before* the expected profits can be realized.

[39] While, per the examples above and in the body of the text, the actual profits may be below what they were expected to be, it may also be that they are greater than the expected outcome of $500,000 because of, for example, an unanticipated price increase.

[40] *See* Lanzillotti & Esquibel, *supra* note 23, at 130. The discount rate would also have to account for the time value of money and expected inflation. David E. Ault & Gilbert L. Rutman, *The Calculation of Damage Awards: The Issue of "Prejudgment Interest,"* 12(2) J. FORENSIC ECON. 97, 103 (1999); Jetley et al., *supra* note 21, at 7.1–7.3; PRATT, *supra* note 17, at 37.

[41] *See* Jones & Laughlin Steel Corp. v. Pfeifer, 462 U.S. 523, 537–540 nn. 20–24 (1983) (addressing evolution of how courts have treated inflation, risk, and time in damage calculations).

budgeting. They realized intuitively that, other things being equal, risky projects are less desirable than safe ones. Therefore financial managers demanded a higher rate of return from risky projects . . .Various rules of thumb are often used to make these risk adjustments. For example, many companies estimate the rate of return required by investors in their securities and use the **company cost of capital** to discount the cash flows . . . [I]nvestors require a higher rate of return from a very risky company, such a firm will have a higher company cost of capital and will set a higher discount rate for its new investment opportunities. . . . Each project should be evaluated at its *own* opportunity cost of capital. . . . That is, the firm should discount the cash flows . . . at the expected rate that investors would demand to make a separate investment (in the project). *The true cost of capital depends upon the use to which the capital is put.*[42]

And in one of the most widely cited handbooks used by valuation practitioners, the author writes:

The cost of capital for a project is typically estimated by studying capital costs (including debt and equity) for existing projects deemed to be comparable in risk. It is related to the risk of the project, not to the risk or credit-worthiness of the firm that is contemplating undertaking the project. Thus, if different firms have the same expectations about the cash flows and risks of a project, they will each perceive the project as having the same NPV. This illustrates . . . that cost of capital is specific to the investment, not the investor.[43]

The importance of accounting for risk in determining sum-certain damages can be illustrated in a slightly different way. Suppose that an investor believes that the expected profits of a project will be $500,000. What would she be willing to pay up front for this kind of opportunity? There is no answer to this question without discounting the expected profits for the possibility ("risks" or "uncertainties") that the project, once completed, won't actually generate $500,000 in profits. For example, if for a *given* level of uncertainty about whether the $500,000 will really materialize, it makes sense to spend $1 million, but it cannot make sense to spend $1 million if the uncertainty about the future payoff of $500,000 increases. To clarify that the $500,000 expected payoff, by itself, doesn't

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[42] BREALEY & MYERS, *supra* note 17, 204–05 (emphasis in original).

[43] IBBOTSON ASSOCS., IBBOTSON SBBI 2009 VALUATION YEARBOOK 28 (2009); *see also* KRISHNA G. PALEPU & PAUL M. HEALY, BUSINESS ANALYSIS & VALUATION: USING FINANCIAL STATEMENTS 8-1 (4th ed. 2008) (discussing the role of government with regard to acquisition outcomes); PRATT, *supra* note 17, at 10 ("[T]he cost of capital is customarily used as a discount rate in order to convert expected future returns to a present value.").

provide sufficient information to determine a sum-certain at T_j, consider three alternatives, each of which has an expected payoff of $500,000:

    A: payoff in 1 year of $0 with probability = .5
       or $1,000,000 with probability = .5

    B: payoff in 1 year of –$500,000 with probability = .5
       or $1,500,000 with probability = .5

    C: payoff in 1 year of –$1,500,000 with probability = .66
       or $4,500,000 with probability = .33

A risk-averse individual would value the expected payoff of $500,000 in each of these alternatives quite differently. Specifically, such an individual would be willing to pay more for opportunity A than for opportunity C. The reason is that the spread between the two possible outcomes in each opportunity increases from A to B to C and, hence, so does the risk involved: opportunity C is more risky than opportunity B which is more risky than opportunity A, even though they each have the same expected payoff. For a risk-averse individual, opportunities with less risk are "worth" more, all else being equal.

While there may be different views about the degree of risk (and corresponding risk premium) between the parties and, hence, a jury issue with regard to the size of a specific risk-adjusted discount rate to be applied in a particular case, it is puzzling that the courts have chosen not to narrow the issue of discounting to the size of the risk premium. Instead, it would appear that juries and judges are often left to determine whether there should even be a risk premium.[44]

As a general matter, R will be "large" relative to r, even when r is set by statute. This is because R includes the risk that the future event will not occur.[45] The numbers in the examples illustrating the differences between Alternatives 1 through 4 are not out of line with what reasonable estimates of R and r might be in a particular case (20% and 3%, respectively). Even in those jurisdictions where r is set by statute, it is generally below 10%.[46] Hence, in the determination of awarded

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[44] Note that the effect of risk can be handled by reducing the prospective loss. In personal injury matters, for example, projected incomes are sometimes reduced by the probability of death before retirement and the probability of retirement at a particular age. As such, the risk premium in the discount rate would be less since the prospective income stream itself has been reduced ("discounted").

[45] *See* Lanzillotti & Esquibel, *supra* note 23, at 130.

[46] *See Prejudgment Interest & Interest on Judgments Generally*, NAT'L CTR. FOR STATE COURTS, http://www.ncsconline.org/WC/Publications/KIS_PreCivPJIPub.pdf (last modified Aug. 21, 2011) (state by state comparison); *see also* John R. Philips & Neill W. Freeman, *Interest as Damages*, *in* LITIGATION SERVICES HANDBOOK: THE ROLE OF THE FINANCIAL EXPERT 9.1–9.20 (Roman Weil et al. eds., 3d ed. 2001) (discussing how interest is awarded under federal and state law).

prejudgment interest, whether prospective damages are discounted by R to the time of judgment or to the time when the injury occurred will almost always substantially affect the size of the sum-certain award. Likewise, whether historical damages are discounted at all or just brought forward to the date of final judgment at the prejudgment interest rate will almost always significantly affect the size of the sum-certain award.

R, however, also affects awarded prejudgment interest in a more subtle, and legally troubling, way. If harm that remains prospective at T_j is discounted at R to T_j rather than to T_0, the plaintiff is being implicitly awarded "prejudgment" interest on prospective damages equal to R, not r. This is easily seen by noting that if prospective damages are, for example, $1 million occurring five years following the date of final judgment and discounted at 20% to the date of final judgment, the damage award is approximately $401,881. If there is an additional year of delay, however, the same $1 million, now four years from the date of final judgment, has a discounted value of about $482,253—20% greater than $401,881. So a delay of one year has, essentially, awarded the plaintiff a prejudgment interest rate of 20%.

The law is also silent on the treatment of what we have termed "once prospective, now historical" losses. Specifically, should "historical" harm be discounted to the date of injury and then brought forward to the date of judgment at the prejudgment interest applied to immediate harms, or should "historical" harm be simply brought forward to the date of judgment at the prejudgment interest rate? These alternatives (Alternatives 1 and 2 in Figure 2, above) reflect quite different views about the meaning of the risk associated with prospective (not historical) losses. We have appealed to a common-sense understanding that "the future is uncertain" and, therefore, that prospective losses are risky, not-for-certain dollars which must be discounted using a risk-adjusted interest rate if a sum-certain award is to compensate, but not overcompensate, the plaintiff. What is really meant by "uncertainty" is a challenging problem and not one that we can fully sort out here. What is clear is that uncertainty and therefore risk must be consistently accounted for when dealing with the possibilities of compensating the plaintiff for the effects of delay.[47]

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[47] One view is that prospective damages are uncertain because the future is certain but "unknowable with certainty." In this view, there is a "true value" for some future event (i.e., a prospective loss component of a damages award), but it is enveloped in a cloud. History then becomes the process by which the cloud dissipates and the "true value" is revealed. Choosing Alternative 2 is consistent with this view of risk. That is, the true values "revealed" by delay should simply be brought forward to the date of final judgment at the prejudgment interest rate. By the time that they are known, they aren't different in kind from the immediate harm to which prejudgment interest applies. A second view is that prospective damages are uncertain because they are stochastic (essentially random). In this view there is no "true value." Rather, future events are random, although some outcomes may be more likely than others. History, in this case, is a particular draw from the random distribution—there could have been other draws. Hence, history doesn't reveal the "true value"—there isn't one—but one of several possible values. Since there was risk associated

D. Consistency Across Causes of Action

Earlier we noted that one dollar today is worth more than one dollar in the future, and for-certain dollars are worth more than risky dollars.[48] Therefore, if, in the but-for world created to determine settlement, the plaintiff lost risky future dollars, it would be inconsistent to award him or her an equivalent dollar amount of for-certain present dollars. Instead, damages should reflect the risk that plaintiff would have faced.[49] In addition, consistency also implies that a sum-certain damages award should reflect the time value of money, regardless of the cause of action. Specifically, unless there are compelling reasons—and we see none—why a dollar of harm under one cause of action should not be equal to a dollar of harm under a different cause of action, the legal principles adopted to make adjustments for time should be applicable across all types of claims. Once a damage calculation reaches the threshold for admissibility, for example, it seems odd that there should be different prejudgment interest rules for damages in torts, contracts, defamation, property and other claims. Once the calculation of the monetary situation of the plaintiff absent the wrong act has been accomplished, all legal claims are homogeneous from an economic point of view—a dollar is a dollar regardless of legal context. Whether a plaintiff loses $100,000, including prejudgment interest to compensate for delay because of a tort, a breach of contract or a violation of a property right is of no consequence for the calculation damages. To make the plaintiff whole requires an award of $100,000, regardless of the claim.[50]

In particular, if prejudgment interest is awarded in order to place the plaintiff in the position he/she would have been in absent the wrongful act, the plaintiff must be compensated for being deprived of the award between T_0 and T_j. It is unlikely that delay occurs *because* of the cause of action. This suggests that prejudgment interest should be awarded on an equal basis for all compensatory dollar awards where a harm has occurred.

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with the outcome and since not discounting risky outcomes to T_0 implicitly awards prejudgment interest at R, then employing Alternative 2 does likewise. It is equivalent to awarding the plaintiff, who was harmed both immediately and prospectively at T_0, compensation for risk that because of the action that the defendant took at T_0, she did not have to bear. Hence, choosing Alternative 1 is consistent with this view of uncertainty and risk and how the plaintiff should be compensated for prejudgment losses.

[48] *See supra* notes 18–19, 35 and accompanying text.

[49] *See* PRATT, *supra* note 17, at 5; Jetley et al., *supra* note 21, at 7.2.

[50] Admittedly, the risk or certainty of prevailing in a contract action may be different than a tort action, but this fact alone has no impact on the proper prejudgment interest rate that should be awarded once the damage award has been proven by a preponderance of the evidence to the trier of fact.

E. Brief Summary

Prejudgment interest is important because there is a delay between the date when an action creating harm occurs and the date when there is a final judgment awarding compensation to the injured party. Full compensation requires payment for the harm of the wrongful act as well as the delay. There are two components of a dollar payment that compensates for the delay: a prejudgment interest rate and an amount of money to which that interest rate is applied. As must be clear from the discussion to this point, the determination of the amount of money to which a prejudgment interest rate applies isn't necessarily straightforward and depends upon how the harm that occurs after the action that creates legal liability is treated. The matter is made more complex in those cases where there is harm to the injured party after the date of the action that creates legal liability, but before the date of final judgment, and even more complex where there is likely to be harm to the injured party after the date of final judgment that awards sum-certain damages. We have shown that the various ways of treating what we termed "historical" and "prospective" harms can yield quite different dollar amounts to which a prejudgment interest rate might be applied.

Having explored the various ways for determining an amount of money to which a prejudgment interest rate might be applied, we next turn to the issue of the economically appropriate prejudgment interest rate.

II. ECONOMIC PRINCIPLES AND PREJUDGMENT INTEREST

What should the prejudgment interest rate be? The answer requires a determination of the amount of money the plaintiff lost because she was deprived of a monetary award between T_0 and T_j. If the plaintiff were awarded money at T_0, and the plaintiff were rational, she would have invested the money (rather than stuffing it in a mattress). That investment would have yielded a return in the time between T_0 and T_j. However, the plaintiff was denied this return by being forced to wait until T_j to receive the award. The prejudgment interest rate should compensate the plaintiff for this loss, but should not be overcompensated simply for delaying.[51]

The rate of return that the plaintiff would receive from an investment depends on at least three factors: (1) the prevailing interest rate, (2) compounding, and (3) the riskiness of the opportunity the defendant's wrongful action denied the plaintiff.[52] The interest rate in the United States has varied substantially over time. In the last decade, for example, the prime rate has varied between 9.5% in 2001

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[51] Gen. Motors Corp. v. Devex Corp., 461 U.S. 648, 654 (1983) ("[P]rejudgment interest should ordinarily be awarded where necessary to afford the plaintiff full compensation for the infringement.").

[52] BREALEY & MYERS, *supra* note 17, at 34, 41–43, 160–64; *see also* PRATT, *supra* note 17, at 5.

and 3.25% in 2011.[53] It therefore makes a difference whether the date when the harm first occurred, T_0, is in 2001 or 2011. It follows that it makes little sense to set a single prejudgment interest rate that is independent of the actual period of time when the delay occurred. Such inflexibility saves little in litigation costs because information regarding current interest rates is readily available, yet makes it essentially impossible to meet the "make the plaintiff whole" standard.[54] Simply put: prejudgment interest should take account of the prevailing economic conditions during the period T_0 to T_j.[55] The proclivity of state legislatures to specify a (fixed) prejudgment interest rate makes little sense either in terms of judicial economy or compensation.

In addition, if the plaintiff had invested the award on T_0, she would have received compound interest. Specifically, in each period between T_0 and T_j the plaintiff can be assumed to have reinvested both principal and interest and, hence, to have received interest on the invested interest in the next period. Moreover, as a practical matter, compound interest is paid on virtually every alternative available to a plaintiff, including bank accounts, bonds, stocks, and commercial contracts.[56] However, courts are given broad latitude to select compound or simple interest, with most choosing simple interest for ease of calculation.[57] However, this practice is ill-conceived because it is not in accord with standard commercial practices.[58]

Finally, under competitive conditions the rate of return on an investment is directly related to the risk of the investment.[59] The return on the involuntary "investment" the plaintiff makes at time T_0 solely because of adjudicatory delay, must be consistent with a prejudgment interest that reflects the risk that the plaintiff faces during the period of waiting for judgment. Put differently, the court cannot know what a plaintiff actually would have done if awarded money at T_0 rather than T_j. The plaintiff could have invested in Google shares and, ex post, have made a high rate of return, or made a low rate of return in U.S. Treasury

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[53] The prime rate is an interest rate on loans to a bank's most creditworthy or best borrowers and is often used as a benchmark of borrowing costs. *Bank Prime Loan Datasheet, Weekly (Wednesday)*, FEDERALRESERVE.ORG, http://www.federalreserve.gov/releases/h15/data.htm (last visited Feb. 22, 2012) (go to the "Bank prime loan" line, then follow the "Weekly (Wednesday)" hyperlink to download the datasheet).

[54] *See* Michael S. Knoll, *A Primer on Prejudgment Interest*, 75 TEX. L. REV. 293, 365–66 (1996) (stating that statutes simplify calculation at the expense of fairness and efficiency and that improved calculations using a risk-adjusted market rate can be made without great difficulty).

[55] *See id.* at 366 ("[T]he law should require courts to award prejudgment interest at the risk-adjusted market rate . . . .").

[56] Although some commercial contracts call for simple interest, this is rare.

[57] *See* Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 557 (Fed. Cir. 1984) (declining to hold that courts should always use compound interest, leaving discretion with trial court).

[58] *See* Knoll, *supra* note 54, at 307–08.

[59] BODIE ET AL., *supra* note 19, at 133.

securities, or lost money betting on subprime mortgage securities. What we do know is what the plaintiff was actually forced to do: she was forced to allow the defendant to keep the damage award between T_0 and T_j. The actual risk faced by a plaintiff in these circumstances is the risk that the defendant would default on a final judgment awarded at T_j. The rate of interest that reflects the probability of a default by the defendant is the defendant's borrowing rate.[60] The logic is that banks are in the business of assessing the risk of their borrowers defaulting on loans. A risky defendant borrowing money from a bank would have been charged a higher interest rate than a less risky defendant. Since the plaintiff has essentially "lent" the award to the defendant, the defendant, on this argument, should pay a prejudgment interest rate equal to what he must pay on a bank loan in order to make the plaintiff whole. A second possible answer is to assume that the court will ensure that the judgment will be paid, and, therefore, the plaintiff essentially faces no risk during the time she must wait until judgment and should receive a risk-free rate of interest. This approach assumes that the risks of litigation itself are not to be considered in determining damages.[61]

Notice that in the first option the determination of the prejudgment interest rate, r, focuses on the position of the defendant. The second option focuses on risk-free opportunities available to the plaintiff. By contrast, the discount rate for the prospective gains that the plaintiff was denied by the defendant's wrongful actions, R, focuses on the risk of plaintiff's lost future opportunities (for example, the expected gains from the plaintiff's investment). Neither of the first two approaches will lead to a determination of r that is the same as R. The fact that r differs from R, however, creates the possibility that the date of trial will affect estimated damages—if the litigants were assigned to a judge with a full calendar rather than to a judge who scheduled an earlier trial, different damage awards would result, all else equal. This undesirable inconsistency can be avoided if all damages at all time periods are discounted by R to time T_0 and then brought forward in their entirety from T_0 to T_j using r (Alternative 3). Any other approach will cause damages to increase or decrease depending on the judge's calendar or strategic manipulation of

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[60] In *Gorenstein Enterprises v. Quality Care-USA, Inc.*, Judge Posner sides with the those who argue that the pre-judgment interest rate should be the defendant's borrowing rate:

> The defendant who has violated the plaintiff's rights is in effect a debtor of the plaintiff until the judgment is entered and paid or otherwise collected. At any time before actual payment or collection of the judgment the defendant may default and the plaintiff come up empty-handed. The plaintiff is an unsecured, uninsured creditor, and the risk of default must be considered in deciding what a compensatory rate of interest would be.

874 F.2d 431, 436 (7th Cir. 1989).

[61] For a discussion of this point, see Knoll & Colon, *supra* note 2, at 9.1–9.18.

the litigation, a factor that should be independent of the calculations necessary to make the plaintiff whole.

Put differently, since R is generally larger than r,[62] if future damages are discounted to the date of final judgment, awarded damages will increase after every trial delay by *more than* compounding by a prejudgment interest rate. This is because the longer the delay, the smaller the portion of the damages that are discounted by R. This inconsistency (and overcompensation) has been overlooked by virtually every jurisdiction.[63]

To summarize, basic economic principles illustrate that there are several methodological flaws with the current process of accounting for time and risk by courts. To maintain internal consistency, and to adhere to well-established and recognized economic principles, courts should not base the available damages on the cause of action alleged. Rather, awards should be based on the total damages suffered, regardless of legal claim. Further, prejudgment interest rates should account for financial market conditions, be compounded, and be equal to the defendant's borrowing rate (if it is assumed that the plaintiff bears the risk that the defendant does not pay the judgment) or the risk-free rate (if it is assumed that there is no risk that the defendant will not satisfy the judgment). These straight-forward adjustments will ensure internal consistency and will more accurately compensate injured parties.

III. THE PERPLEXING TREATMENT OF PREJUDGMENT INTEREST IN UTAH LAW

With this foundation, we evaluate how Utah courts account for risk and delay through an award of prejudgment interest. As a general matter, Utah courts run afoul of many of the fundamental economic precepts outlined above.

A. *When Parties Are Eligible for Prejudgment Interest in Utah*

Not all causes of action are eligible to receive prejudgment interest awards as part of damages. Utah's law on the availability of prejudgment interest originated with the Utah Supreme Court's seminal opinion in *Fell v. Union Pac. Ry. Co.*[64] In *Fell*, the plaintiff arranged to have several sheep transported from Wyoming to Illinois in the defendant's rail car.[65] During transport, the sheep were left in the rail car without any food or water for seventy-two hours.[66] Several sheep died and the

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[62] *See supra* note 45 and accompanying text.

[63] The exception is the Eleventh Circuit, which stands alone in recognizing this principle. *See, e.g.*, Deakle v. John E. Graham & Sons, 756 F.2d 821, 833 (11th Cir. 1985) ("Symmetrical treatment should be given to the estimated lost earnings both before and after trial so that neither party can benefit by delaying the final judgment.").

[64] 88 P. 1003 (Utah 1907).

[65] *Id.* at 1003.

[66] *Id.*

surviving sheep lost much of their weight.[67] As a result of the delivery delay, the plaintiff was forced to sell the surviving sheep for significantly less than he would have been able to sell them for had the delivery been on time and without incident.[68] The trial court awarded damages for the sheep that died during transport, the loss in weight for the sheep that survived transport, and the loss caused by the overall delay.[69] After damages for the negligent transport were calculated, the trial court allowed prejudgment interest on the entire damage amount.[70] In affirming the awarding of prejudgment interest on the entire amount, the court examined, and rejected, the standard adopted by many other jurisdictions that limit prejudgment interest only to "liquidated" damage claims.[71] The court explained that in cases of torts against property, there is no logic to support such a restriction:

> If a person's property is destroyed or damaged, why is he not entitled to be compensated to the full extent of its value in money so that he may replace the same with other property of a like nature? If on the day of its injury or destruction he restores or replaces it with his own money, why is he not entitled to interest on that money to the date of repayment? If he had loaned the money to some one, he certainly would be entitled to interest, and, if he borrowed it from some one, he would likely have to pay interest for its use. . . . Is it an answer to say that the damages are unliquidated, and therefore interest is not to be allowed? This, to our minds, is no reason at all in case of injury to or destruction of property.[72]

The court went on to lay down the oft-cited rule for a prejudgment interest award in Utah:

> The true test to be applied as to whether interest should be allowed before judgment in a given case or not is, therefore, not whether the damages are unliquidated or otherwise, but whether the injury and consequent damages are complete and must be ascertained as of a particular time and in accordance with fixed rules of evidence and known standards of value, which the court or jury must follow in fixing the amount, rather than be guided by their best judgment in assessing the amount to be allowed for past as well as for future injury . . . .[73]

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[67] *Id.*

[68] *Id.*

[69] *Id.* at 1004.

[70] *Id.* The court noted that it was unclear whether prejudgment interest was awarded from the date the sheep were eventually delivered to their destination or from the date the plaintiff made his first demand for damages. *Id.*

[71] *Id.* at 1005–07.

[72] *Id.* at 1005–06.

[73] *Id.* at 1007.

While Utah courts refused to limit prejudgment interest to "liquidated" damages—a standard that proved to be extremely difficult to apply—applying the standard articulated by the court in *Fell* is also challenging.[74] Moreover, the court carved out several causes of action where, it argued, the resulting damages are not fixed with "known standards of value" and thus are not eligible for prejudgment interest: "In all personal injury cases, cases of death by wrongful act, libel, slander, false imprisonment, malicious prosecution, assault and battery, and all cases where the damages are incomplete and are peculiarly within the province of the jury to assess at the time of the trial," no prejudgment interest is permissible.[75] For these particular causes of action, the court held that prejudgment interest is not allowed because the resulting damages are supposedly "incomplete" and "continuing."[76] Beyond this superficial explanation, the court offered no further justification for an award of prejudgment interest on some claims but not others.

Courts interpreting the *Fell* standard have muddied the waters further by creating an even more difficult and unworkable standard. Opinions following *Fell* have required that damages be calculated with "mathematical certainty" in order to receive an award of prejudgment interest.[77] In *Bjork v. April Industries, Inc.* the Utah Supreme Court paraphrased the *Fell* language quoted above, but added the phrase "or cannot be calculated with mathematical accuracy."[78] Where mathematical certainty is lacking, the jury must ascertain the damages, and an award of "prejudgment interest is not allowed."[79]

In *Bjork*, the Utah Supreme Court affirmed the trial court's award of prejudgment interest for damages suffered by two shareholders of a corporation who established that the corporation breached an agreement to register and thus make them eligible for sale of shares of the corporation. In an earlier opinion in the same case, the court developed what it believed was the proper measure of damages for the alleged breach, which was the difference between the highest share value during the public offering and the value of the shares at the time of trial.[80] The trial court followed this methodology and then added prejudgment interest to the damage estimate.[81] To estimate these damages, it then assumed that there would have been a buyer for the additional shares of stock at the stock's

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[74] *See* Canyon Country Store v. Bracey, 781 P.2d 414, 422 (Utah 1989); LeFavi v. Bertoch, 994 P.2d 817, 822–23 (Utah Ct. App. 2000).

[75] *Fell*, 88 P. at 1006.

[76] *Id.* As discussed in detail below, damages awarded for personal injury claims are now entitled to prejudgment interest by statute. *See infra* text accompanying notes 118–124.

[77] *See LeFavi*, 994 P.2d at 823; Orlob v. Wasatch Med. Mgmt., 124 P.3d 269, 277 (Utah Ct. App. 2005); Bailey-Allen Co. v. Kurzet, 876 P.2d 421, 427 (Utah Ct. App. 1994).

[78] Bjork v. April Indus., Inc., 560 P.2d 315, 317 (Utah 1977).

[79] *Id.*

[80] *Id.* at 316–17.

[81] *Id.*

highest price during the public offering, and that there would be a buyer willing to purchase the additional available shares at the current share price. In this case, the court argued, the share price on a particular date may be mathematically accurate.[82] Yet the damage analysis was only certain (such that prejudgment would be appropriately awarded) after layers of speculative assumptions were accepted.[83] Despite these uncertainties, prejudgment interest was awarded.[84]

The use of the phrase "mathematical accuracy" is truly unfortunate. By their nature, damages are calculated by constructing a hypothetical violation-free, but-for, scenario that necessarily requires a damage expert to make assumptions. The courts, however, provide no guidance with regard to which "reasonably certain" assumptions can be judged to be "mathematically accurate" and which fail to meet this standard. For example, it cannot be the case that prejudgment interest is appropriate only where an expert's assumptions are uncontested.[85] However, in *Cornia v. Wilcox*,[86] the Utah Supreme Court denied prejudgment interest to a plaintiff in a breach of contract and common law agistment case because the jury heard conflicting testimony on every important aspect of the damages calculation.[87]

In *Cornia*, the plaintiffs entered into an agreement with the defendant for the total care of approximately 500 head of cattle for one year.[88] At the end of the year, several hundred cattle were missing, and those found were extremely unhealthy.[89] The plaintiffs' expert assumed, for purposes of calculating damages, that every lost mature cow was pregnant despite clear evidence that only half of the returned mature cattle were pregnant.[90] Additionally, the jury heard conflicting testimony on the expected pregnancy rates, weight range, loss rates, and market prices for both mature cattle and calves.[91] Because these disputed factors were the most significant ones for determining damages, the court affirmed the trial court's denial of prejudgment interest:

> Plaintiffs' expert did estimate the value of the missing cows in his damage calculation. However, "[w]hile the expert's estimates were a reliable enough basis for awarding damages, the assumptions used to

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[82] *Id.* at 317.

[83] *Id.* at 316–17 (describing plaintiff's methodology for calculating damages, including using the *highest* stock value as the basis for damages).

[84] *Id.* at 317.

[85] The United States District Court's opinion in *ClearOne Commc'ns, Inc. v. Chiang*, No. 2:07-CV-37-TC, 2009 WL 1108800, at *2–3 (D. Utah Apr. 20, 2009), probably erred in the direction of not awarding interest.

[86] 898 P.2d 1379 (Utah 1995).

[87] *Id.* at 1387.

[88] *Id.* at 1382.

[89] *Id.*

[90] *Id.* at 1386.

[91] *Id.* at 1387.

arrive at those estimates are by no means the only way to arrive at [the] damages." Without any clear factual information, plaintiffs' damages could not be measured by "facts and figures" or "calculated with mathematical accuracy."[92]

This same general analysis would apply to nearly every single contested claim brought in Utah—most cases have competing experts or use experts who make different assumptions and offer opinions based on those assumptions. Taking the court's basis to its logical conclusion would lead to a wholesale prohibition of prejudgment interest. Indeed, juries must almost always choose between conflicting assumptions offered by experts on opposing sides regarding damages. Moreover, were this the general rule, the sensible litigation strategy is clear: dispute every assumption, thereby eliminating the possibility of an award of prejudgment interest. It cannot possibly be a coherent rule that prejudgment interest is only permitted when an expert's damage calculation *and assumptions* are unchallenged. Yet this appears to be what is required under the "mathematically accurate" rule.

In *Pro Axess, Inc. v. Orlux Distribution, Inc.*,[93] the Tenth Circuit, employing Utah law, denied prejudgment interest because the plaintiff offered multiple damage calculations throughout the course of the litigation.[94] Specifically, the plaintiff made several adjustments to its damage calculation, including one estimate of total damages in its complaint, a different estimate offered in an interrogatory, a third number offered in an affidavit, and still a fourth number offered at trial.[95] The plaintiff argued that the revised damage figure resulted from new information that became available through discovery and because there was a slight miscalculation in an earlier estimate of costs. The court held that the changing damage figure made it clear that damages could not be calculable within a mathematical certainty.[96] This evolving damage figure, combined with the lack of proof offered by the plaintiff of its claim of a 35% gross profit margin used to calculate damages, resulted in the court rejecting a claim for prejudgment interest.[97] The court seemed to suggest that putting forth different damage estimates throughout the entire litigation process could result in a denial of prejudgment interest.[98]

This draconian rule ignores the realities of litigation and the discovery process, and even contradicts the broad initial disclosure requirement found in

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[92] *Id.* (alterations in original).

[93] 428 F.3d 1270 (10th Cir. 2005).

[94] *Id.* at 1283; *see* AE, Inc. v. Goodyear Tire & Rubber Co., 576 F.3d 1050, 1056–57 (10th Cir. 2009).

[95] *Pro Axess*, 428 F.3d at 1283.

[96] *Id.* at 1284.

[97] *Id.* at 1283–84.

[98] *Id.*

Rule 26(a) of the Federal Rules of Civil Procedure.[99] At the outset of litigation, a plaintiff can rarely present a precise calculation absent information obtained during discovery. Thus, parties are placed on the horns of a dilemma—follow Federal Rule of Civil Procedure 26(a) (which requires disclosure of a computation of each category of damages) and risk losing prejudgment interest by miscalculating damages at the preliminary stages of litigation, or wait until all discovery is concluded before submitting a "mathematically certain" damage calculation and risk running afoul of the broad initial disclosure requirements.[100] This rule punishes parties who attempt to comply with Rule 26(a), which partly explains why most plaintiffs refuse to provide any information on damages as part of initial disclosures and instead report that damages will be the subject of future discovery.

In 2009, the Utah Supreme Court attempted to clarify the prejudgment interest standard with hopes of bringing it closer to how it was originally articulated in *Fell*. In *Encon Utah, LLC v. Fluor Ames Kraemer, LLC*,[101] the Utah Supreme Court held that "the [prejudgment interest] standard focuses on the measurability and calculability of the damages."[102] The court further held that prejudgment interest is appropriately awarded where damage figures are subject to calculation, even if the method of calculating those damages is uncertain.[103] The defendants argued three reasons why the plaintiff should not receive prejudgment interest: (1) the plaintiff could not consistently determine its own damages (i.e., *Pro Axess*), (2) the trial court had to use its "best judgment" in determining damages (i.e., *Cornia*), and (3) the trial court had to determine the "reasonableness" of some of the aspects of damages that were alleged (i.e., *Bjork*).[104] In addressing the defendant's arguments, the court returned to a more accurate description of the *Fell* standard by explaining that damages that cannot be calculated with mathematical accuracy are left to "the broad discretion of the trier of fact," based on a "mere description of the wrongs done or injuries inflicted."[105] First, the court distinguished *Pro Axess*, holding that the evolving damages in *Pro Axess* could not be calculated with any degree of mathematical certainty, unlike the amended damages in *Encon*, which did not infringe on the court's ability to subject the figures to mathematical calculation.[106] The court held that both parties agreed in *Encon* that the profit rate

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[99] FED. R. CIV. P. 26(a) (requiring parties to submit, as part of its initial disclosures, a "computation of each category of damages claimed by the disclosing party").

[100] A party could, in theory, keep the original estimate provided as part of the initial disclosures, but it is very uncommon for damages to be known with any degree of confidence or certainty before any discovery has taken place.

[101] 210 P.3d 263 (Utah 2009).

[102] *Id.* at 272.

[103] *Id.* at 273.

[104] *Id.* at 272.

[105] *Id.* at 272–73.

[106] *Id.* at 273–74. The court held that a voluntary reduction in the claimed damages done to conform to the evidence is not enough to preclude an award of prejudgment interest, even if the adjustment is done during the course of trial. *Id.* at 273.

on the fixed-price contract at issue was 10% and that 41.9% of the project had been completed, unlike in *Pro Axess*, where one side used an unsupported 35% profit rate. Thus, in *Encon* the trial court could simply multiply the fixed-rate contract price and the percentage of the project that had been completed, using the agreed upon profit rate.[107]

Second, the court distinguished *Cornia*, holding that the existence of competing experts on the issue of damages does not automatically preclude prejudgment interest. The court noted that in *Encon*, the parties agreed that it was a fixed price contract, that a 10% profit rate was acceptable under the circumstances, and that 41.9% of the project had been completed.[108] Thus, although the exact figures were in dispute, the calculation itself was still subject to mathematical calculation and that merely "[e]xercising . . . discretion to determine which expert's valuation was more accurate does not present the same concern . . . raised in *Cornia*."[109]

Third, the court held that a dispute between experts on what costs to include in a valuation does not, by itself, render a damage calculation incapable of being measurable with facts and figures.[110] After disposing of each of the defendant's arguments against prejudgment interest, the court also acknowledged that a party's damage figures do not need to be static from the date the claim is filed through final judgment to be entitled to prejudgment interest.[111]

Following the court's recent decision on prejudgment interest, we can summarize the current Utah standards as follows:

1. Prejudgment interest is appropriate when damages are both measurable and calculable.[112]

2. The existence of competing experts, by itself, is not enough to preclude an award of prejudgment interest.[113]

3. Damages that are to be determined by the broad discretion of the trier of fact are not eligible for prejudgment interest (e.g., damages for defamation, wrongful death, false imprisonment).[114]

4. A minor adjustment in a damage calculation over the course of litigation, does not, by itself, preclude an award of prejudgment interest, as long as the adjustment does not "infringe the court's

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[107] *Id.* at 274 n.31.

[108] *Id.* at 274–75 & n.31.

[109] *Id.* at 275.

[110] *Id.* at 274.

[111] *Id.* at 275.

[112] *Id.* at 272.

[113] *Id.* at 274–75.

[114] *Id.* at 272–73 & n. 23.

ability to subject those damage figures to mathematical calculation."[115]

5.   Damage figures do not need to be static over time to be eligible for prejudgment interest, but the figures themselves must be subject to mathematical calculation and not based on a mere description of the wrongs done or injuries inflicted.[116]

Despite the Utah Supreme Court's attempt to clarify the law on prejudgment interest, what remains is still a confusing and inconsistent standard. While these broad guidelines are superior to the rigid, pre-*Encon* requirements of a "mathematical certainty" standard, they are economically unsound under many circumstances discussed in more detail below. Even so, it is not clear whether the mathematical certainty standard remains intact given the court's pronouncement in *Encon* that each of the iterations offered by the court—including the requirement of mathematical certainty—is "correct," despite moving to a "measurability" and "calculability" standard.[117]

B. The Statutory Prejudgment Interest Rate in Utah

Once it has been determined that a party is eligible for prejudgment interest, the rate itself is typically set by statute. In Utah, there are two statutes addressing the appropriate rate. Section 15-1-1 of the Utah Code sets the prejudgment interest rate for contracts, in the absence of a negotiated rate in the contract, at a simple (that is, not compounded) rate of 10% per annum.[118] Until 2009, this section and the established rate also applied to personal injury damages eligible for prejudgment interest.[119] However, in 2009, the Utah Legislature amended this section and changed the prejudgment interest rate in personal injury cases to a simple rate of 7.5% per annum.[120] The legislative history of the 2009 amendment indicates a likely compromise was reached by setting the rate at 7.5%. An earlier draft of the bill included the following language that did not survive in the final bill:

In all actions brought to recover damages for personal injury, the defendant shall accurately calculate any prejudgment interest and establish the accuracy of the calculation. If the defendant does not, any prejudgment interest on special damages shall be calculated at the legal

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[115] *Id.* at 274.

[116] *Id.* at 272, 275.

[117] *Id.* at 272.

[118] UTAH CODE ANN. § 15-1-1(2) (West 2009).

[119] UTAH CODE ANN. § 78B-5-824 (West 2008).

[120] UTAH CODE ANN. § 78B-5-824 (West 2011 & Supp.).

rate as defined in Section 15-1-1 from the date of occurrence of the act giving rise to the cause of action to the date judgment is entered.[121]

The next version of the bill replaced the reference to Section 15-1-1 with a fixed 8% prejudgment interest rate.[122] The final bill dropped the prejudgment interest rate to 7.5% per annum simple interest without debate or discussion.[123] As a result, Utah now has different prejudgment interest rates for contract and personal injury causes of action.[124] Accordingly, if a court determines that a party is eligible for prejudgment interest (and the contract between the parties does not otherwise indicate such a rate), the court simply selects the applicable statutory rate and applies it to the damage award determined by the trier of fact.

In summary, Utah law regarding when a party is eligible for prejudgment interest is confusing and internally inconsistent, despite recent attempts by the Utah Supreme Court to clarify the standard. Moreover, even if a party is determined to be eligible for prejudgment interest, the rate that is applied, which is set by statute, is different for different causes of action. In the final section below, we evaluate Utah law on prejudgment interest through the lens of economics.

IV. AN ECONOMIC ASSESSMENT OF UTAH LAW ON PREJUDGMENT INTEREST

In many respects, the current Utah legal standard conflicts with the economic principles set forth in Section I. In other respects, Utah law simply lacks logical coherence. Laws create incentives, either purposefully or inadvertently. Since the sole purpose of prejudgment interest is compensation for delay,[125] the incentives created by a prejudgment interest rule should be neutral. However, Utah's prejudgment interest standard and statutory rate sometimes favor plaintiffs and sometimes favor defendants, but almost always encourage at least one party to attempt to game the system so as to change the economic value of a damage award merely by delaying the date of final judgment. In this section we explore these conflicts, contradictions, and inconsistencies in greater detail.

A. Utah Law on Prejudgment Interest Violates Simple Economic Principles

As described above, parties are only eligible for prejudgment interest if the damage calculation to which it is connected is "complete," or "fixed as of a particular time," or "measurable by facts and figures."[126] Often what courts mean

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[121] H.B. 192, 2009 Leg., Gen. Sess. (Utah Feb. 23, 2009) (H. Comm. Amend. 1).

[122] H.B. 192, 2009 Leg., Gen. Sess. (Utah Feb. 23, 2009) (H. Comm. Amend. 2).

[123] H.B. 192, 2009 Leg., Gen. Sess. (Utah Feb. 23, 2009) (H. Comm. Amend. 3).

[124] § 78B-5-824 itself prohibits prejudgment interest on future wages, which assumes that discounting is to the trial date. This language, unfortunately, creates ambiguity in the statute.

[125] *See* Knoll, *supra* note 54, at 294.

[126] Encon Utah, LLC v. Fluor Ames Kraemer, LLC, 210 P.3d 263, 272 (Utah 2009).

by these alternative formulations is that damages that are determined by a jury without significant expert guidance are not eligible for prejudgment interest.[127] The holding in the case of *Russo v. Ballard Medical Products* is typical: "the jury likely considered [plaintiff's] unjust enrichment in determining the damages, precluding an award of prejudgment interest."[128] According to Utah law, if the damage award is left to the broad discretion of the trier of fact, the injured party will not receive prejudgment interest.[129] As discussed in detail below, the rationale is the unsupported supposition that juries incorporate prejudgment interest whenever they determine damages without guidance from experts.[130] In addition to its other problems, this approach to restraining jury overreaching violates the "dollar is a dollar" principle because it requires that prejudgment interest be allocated based on the type of claim pled, as well as the ability of an expert to quantify the injury. For example, because damages related to loss of employment are relatively easy to calculate, plaintiffs will typically receive prejudgment interest in such cases. In contrast, a self-employed entrepreneur subjected to defamation, with a similar loss of future income, will not receive prejudgment interest because the loss of reputation is more difficult to quantify by an expert and more of the determination is left to the jury. The losses may be exactly the same, yet Utah law essentially penalizes the defamation victim, but not the negligence or wrongful termination victim.

In this regard, Utah law takes an extreme position in its attempt to control perceived jury abuse. Even if only a portion of an award is subjected to jury determination under Utah law, the entire award is ineligible for prejudgment interest. For example, in *Russo*, the court denied an award of prejudgment interest because the trier of fact likely included the equitable claim in its calculation of damages:

> Here, the $20 million award was based on the perceived harm of Ballard's misappropriation of trade secrets and breach of the [Confidential Disclosure Agreement]. . . . Further, the jury likely considered Ballard's unjust enrichment in determining the damages, precluding an award of prejudgment interest. Accordingly, Mr. Russo's jury verdict does not qualify for prejudgment interest under Utah law.[131]

The court recognized that damages for misappropriation of trade secrets can include the actual loss caused by the misappropriation, which may have been

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[127] *See* Russo v. Ballard Med. Prods., No. 2:05-CV-59, 2007 WL 752164, at *1 (D. Utah Mar. 7, 2007) (quoting Smith v. Fairfax Realty, Inc., 82 P.3d 1064, 1068–69 (Utah 2003)).

[128] *Id.* at *2.

[129] *See supra* text accompanying note 112.

[130] *See Russo*, 2007 WL 752164, at *2.

[131] *Id.*

proven by the plaintiff in that case.[132] But under the court's ruling, the actual and measurable damages that the plaintiff may have incurred as a result of the defendant's conduct were not eligible for prejudgment interest because there was also an element of unjust enrichment that the jury may have also considered.[133]

Moreover, the rationale that when juries determine damages they include prejudgment interest and, therefore, an explicit award of prejudgment interest would result in overcompensation is most likely litigator folklore.[134] Instead of assuming, without any real evidence, that juries have wrapped prejudgment interest into awarded damages, a far better way to handle this concern is to provide the jury with a specific jury instruction on the issue of prejudgment interest and force the jury to execute a special jury form that contains a separate entry for prejudgment interest.[135]

An even more egregious violation of the "dollar is a dollar" principle is that Utah law treats two equivalent damage methodologies, *for the same injury*, differently for the purposes of the application of prejudgment interest. It is well known that the methodologies for calculating the fair market value of a lost asset and the discounted lost profits from a lost asset are mathematically equivalent.[136] Yet one of these measures will receive prejudgment interest under Utah law while the other will not. For example, in *Smith v. Fairfax Realty, Inc.*,[137] the Utah Supreme Court permitted prejudgment interest on damages calculated using a fair market value calculation of real property.[138] The court acknowledged that two Utah Court of Appeals opinions reached the opposite conclusion, determining that fair market value calculations are "inherently uncertain."[139] In overruling these decisions, the court simply noted that denying prejudgment interest on a fair market value calculation of real property is inherently inconsistent with *Fell*.[140] Similarly, in *Kraatz v. Heritage Imports*,[141] the Utah Court of Appeals affirmed an award of prejudgment interest on a fair market value calculation of an automobile dealership calculated using the book value of the dealership's assets and future

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[132] *Id.* at *2 & n.4.

[133] *Id.* at *2.

[134] *See* Edith Greene & Brian Bornstein, *Precious Little Guidance: Jury Instructions on Damage Awards*, 6 PSYCHOL. PUB. POL'Y & L. 743, 748–49 (2000) (discussing how there is almost no empirical data on whether jurors correctly interpret, much less even understand, jury instructions on damages).

[135] *Id.* at 748 (discussing how jurors in criminal cases seem to comprehend specific jury instructions with greater precision than vague and confusing instructions regarding damages).

[136] *See* PRATT, *supra* note 17, at 9–10.

[137] 82 P.3d 1064 (Utah 2003).

[138] *Id.* at 1069–70.

[139] *Id.* at 1070 n.7.

[140] *Fell v. Union Pac. Ry. Co.*, 88 P. 1003 (Utah 1907).

[141] 71 P.3d 188 (Utah Ct. App. 2003).

earnings potential.[142] The court held that "[t]his loss is not of the type considered to be unfixed and unmeasurable, such as the loss involved in pain and suffering or wrongful death."[143]

In contrast, in *ClearOne Communications, Inc. v. Chiang*,[144] a Utah District Court declined to award prejudgment interest for an estimate of lost profits using a discounted cash flow methodology.[145] In that case, the court held that the expert's assumptions were challenged by the opposing party's expert, thus prejudgment interest was not appropriate despite those assumptions being reliable enough to provide a basis for awarding damages.[146]

This distinction makes no sense. Conceptually, the fair market value of, for example, real property can be arrived at by estimating the value of the future profit stream the property could generate in its highest and best use.[147] Similarly, a lost profits analysis for a lost parcel of land would be performed by discounting the future profits from the property. Both measures are an estimate of how much a buyer would be willing to pay for the property today.[148] Why Utah law treats two methods differently with regard to the prejudgment interest is a mystery.

B. Utah's Statutory Prejudgment Interest Rates Are Inconsistent with Applicable Economic Principles

The Utah Legislature has established different prejudgment interest rates for contract causes of action (in the absence of an agreed-upon rate) and personal injury claims.[149] Both of these rates ignore changes in macroeconomic interest rates, are simple and not compounded rates, and are, of course, different for different claims (thereby implying that a dollar in contract damages is not the same as a dollar in tort damages).

The distinction between the rates of interest applied to different causes of action is a glaring example of legislatively created inconsistency. The legislative history provides no reasoning of either provision for the choice of an interest rate or its limited application to a specific cause of action.

Utah statutes do make clear that prejudgment interest awarded in Utah is to be calculated using simple interest rather than compounding.[150] Presumably, this rule was developed for simplicity and ease of calculation. Yet anyone with access to a computer or an interest table can calculate compound interest. When the law goes

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[142] *Id.* at 204–05.

[143] *Id.* at 204.

[144] No. 2:07-CV-37, 2009 WL 1108800 (D. Utah Apr. 20, 2009).

[145] *Id.* at *3.

[146] *Id.* at *2–3.

[147] SHANNON P. PRATT, ROBERT F. REILLY & ROBERT P. SCHWEIHS, VALUING A BUSINESS 268–70 (3d ed. 1996).

[148] *See id.*

[149] *See supra* Part III.B.

[150] *See supra* Part III.B.

to such extraordinary lengths to establish procedural fairness and to ensure legal outcomes are based on reliable evidence, why intentionally mandate that economically incorrect calculations be introduced which harm plaintiffs in order to avoid use of a calculator or computer?

Utah law further fixes a prejudgment interest rate for all time (or, more accurately, determines two different prejudgment interest rates for all time).[151] Setting a fixed prejudgment interest rate by statute ignores market realities— markets determine the amount of money the plaintiff would have been able to earn had there been no injury, and it's unclear why the Utah Legislature believes that it should supplant the market in this case. Since the statutory rates are, except in unusual (inflationary) circumstances, above typical market rates, it would appear that the Legislature wanted to provide more compensation for delay than would the use of market-determined prejudgment interest rates. So, in contrast with excluding compounding (which hurts plaintiffs), by setting a fixed-rate independent of market conditions, the Utah Legislature has intervened in a way that generally overcompensates plaintiffs.

Setting a statutory rate above what is likely to be an applicable market rate does, however, provide incentives for plaintiffs to induce delay and for defendants to move things along.[152] On balance, it is unclear which incentive dominates and, hence, it is unclear whether the Legislature's efforts have speeded up or slowed down the pace of litigation. We can find no legislative history that speaks to this issue. In any event, because the incentives go in opposite directions, it is unclear what impact the blunt statutory rate may have on the speed of litigation.

C. "Mathematically Certain" Is an Unworkable Standard

Although the Utah Supreme Court recently clarified the "mathematically certain" standard for prejudgment interest, it remains problematic. A requirement that damages be mathematically certain is an unattainable standard. Damage experts measure monetary quantities in a hypothetical world in which the violation of the law did not occur. Simply by the nature of the processes leading to estimates of damages, no certainty, let alone mathematical certainty, could possibly apply to a damage calculation. Indeed, there is already a standard in place that estimates of damages must meet the established "reasonable certainty" standard under Utah law. To be admissible, any damage analysis must meet the requirements of Utah's Rule of Evidence 702, which requires that it must employ approaches that: "(1) are

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[151] *See supra* Part III.B.

[152] This is because, when the statutory prejudgment interest rate exceeds the rate that could be earned in the market, the better investment is litigation. Put differently, a plaintiff is incentivized to extend the litigation to continue earning a rate in excess of what could be earned in the market.

reliable, (2) are based upon sufficient facts or data, and (3) have been reliably applied to the facts [of the case]."[153]

Under this established standard, damage analyses are already subjected to rigorous scrutiny before being presented to a jury. However, given that a jury is allowed to consider damages estimates based on "reasonable certainty" and Rule of Evidence 702, it makes no sense to impose a higher standard (in this case an unreachable one) before prejudgment interest on these damages is allowed. Put differently, the "mathematical certainty" requirement imposes an additional and unnecessary requirement on expert calculations—a requirement that may be nearly impossible to adhere to if there are competing experts.

The "mathematically certain" standard is also used to bar prejudgment interest for estimates of prospective damages. By their nature, prospective damages are hypothetical, but it is unclear why this prevents a party from being fully compensated for delay. In *Encon*, the Utah Supreme Court noted with approval several earlier cases in which prejudgment interest was denied for prospective damages, even when they were calculated according to accepted standards.[154] However, the rationale for such a rule distinguishing between "prospective" and, for example, "once prospective, but now historical" damages is unclear. The court notes without explanation that future lost profits are "unrealized." But historical damages, and even immediate damages in many cases, are also "unrealized" in the sense that they are determined, in part, by a hypothetical but-for world. The court quotes a Utah Court of Appeals decision in *Anesthesiologists Associates of Ogden v. St. Benedict's Hospital*[155] with approval that the presence of "lost future profits injects an air of uncertainty and speculation into the calculation of damages."[156] However, prospective damages are not *necessarily* more speculative than historical damages, and both historical and prospective damage calculations must meet the admissibility standard under Rule 702 of the Utah Rules of Evidence before the issue of prejudgment interest arises in any event. In sum, there is no principled reason to distinguish one component of damages from another with regard to prejudgment interest as long as the court allows for the component to enter into the actual awardable damages.[157]

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[153] UTAH R. EVID. 702.

[154] Encon Utah, LLC v. Fluor Ames Kraemer, LLC, 210 P.3d 263, 272–75 (Utah 2009). The Utah Supreme Court is inconsistent on this point. In *Smith v. Fairfax Realty, Inc.*, the court held that "fair market valuations of real property are within the category of damages upon which prejudgment interest may properly be awarded." 82 P.3d 1064, 1069 (Utah 2003). Indeed, the calculation of fair market value involves discounting future values, or estimating this amount using the market method.

[155] 884 P.2d 1030 (Utah Ct. App. 1994).

[156] *Encon*, 210 P.3d at 274 n.30 (quoting Anesthesiologists Assoc. of Ogden v. St. Benedict's Hosp., 852 P.2d 1030, 1042 (Utah Ct. App. 1993)).

[157] Courts applying Utah law deny prejudgment interest altogether when damages are calculated as unjust enrichment. *See* Russo v. Ballard Med. Prods., No. 2:05-CV-59, 2007 WL 752164 (D. Utah Mar. 7, 2007). There is no valid reason for such a prohibition.

D. Discounting to the Date of Trial or Final Judgment
Awards Prejudgment Interest at a Rate Unrelated to Delay

As demonstrated earlier, if a court permits the plaintiff to discount prospective damages to the date of trial rather than the date of injury, the court is effectively awarding prejudgment interest equal to the discount rate, thereby sidestepping legal and statutory prejudgment interest requirements.[158] Allowing the plaintiff to discount prospective harms to the date of trial also creates inconsistencies within the law as well as inconsistencies with basic economic principles.

A simple example illustrates the several inconsistencies that arise when a court allows the plaintiff to discount prospective harm to the date of trial (T_j) rather than the date of injury (T_0). Suppose that the immediate harm (H_0) is \$100,000 and the prospective harm is the possible loss of \$1 million ten years from the date of injury. Suppose further that, due to delay, the trial is scheduled to occur three years after the date of injury. Suppose that the prejudgment interest rate is 8% (set, for example, by statute), compounding is permitted and the agreed-upon discount rate for prospective harms is 20% (as determined by evidence). Suppose, finally, that at the last minute the trial is postponed one year, so that it now occurs four years after the date of injury.

Had the trial occurred after three years, the plaintiff would have been awarded \$405,051 [\$100,000 x $(1.08)^3$ + \$1,000,000 / $(1.2)^7$]. Exactly the same immediate harm (\$100,000) and prospective harm (\$1 million, 10 years from the date of injury) would yield damages of \$473,909 following the one-year additional delay if a court allows for discounting to the date of trial and final judgment (assumed to be the same in this example). The plaintiff is awarded, essentially, prejudgment interest of about \$68,000 for the one year delay, which is an "effective" prejudgment interest rate of 17%. There is an obvious inconsistency between the prejudgment interest rate the court believes it is applying (8%) and the rate of prejudgment interest the plaintiff actually receives for this one-year delay (17%).

Clearly, the effective prejudgment interest rate can also exceed the statutory prejudgment interest rate. That is, the actual interest awarded in determining damages can (depending upon the difference between r and R) be greater than the legislature-mandated prejudgment interest rate. Hence, if the legislature believes that it should set the prejudgment interest rate—which the Utah Legislature has clearly done in certain cases—its efforts will be subverted whenever there are prospective as well as immediate harms included in damages, and courts allow plaintiffs to discount prospective harms to the date of final judgment.

It is also clear that the effective prejudgment interest rate when discounting is to the trial date will exceed the risk-free rate and, in almost all cases, the defendant's borrowing rate. This means that if a court, in the absence of specific statute, is persuaded by the argument that the prejudgment interest rate should be either the risk-free rate or the defendant's borrowing rate, but then allows the

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[158] *See supra* Part I.

plaintiff to discount prospective harms to the date of final judgment, it is allowing the plaintiff to subvert the court's determination of the appropriate prejudgment interest rate.

Discounting to the date of final judgment has the further effect of awarding two different prejudgment interest rates, one explicit and one implicit, and, it follows, violates the simple economic principle that "a dollar is a dollar." Specifically, some dollars (those tied to prospective harms) are worth more than other dollars (those tied to immediate harms). This is a particularly curious outcome given that courts generally view prospective damages as "less certain" than immediate or other "historical" damages.

Discounting to the date of trial also means that a plaintiff can receive implicit prejudgment interest when the law may not have allowed for explicit prejudgment interest. For example, suppose that the $100,000 in immediate damages meets a "mathematical accuracy" (or similar) test, but the $1 million in prospective damages does not. Then when applying this or an analogous test, if the $1 million were discounted to the date of injury, there would be no compensation for delay for the (present) value of that component of damages, while there would be compensation for delay for the $100,000 component. The plaintiff could get compensation for delay for the (present) value of the $1 million, however, by persuading the court that she should be able to discount the $1 million to the date of trial and, oddly, the effective prejudgment interest on the $1 million would be larger than the actual prejudgment interest allowed on the $100,000. In short, with regard to the various components of damages, something comes in the back door which the court thought it was preventing from entering the front door.

This tangle of inconsistencies is avoided when prospective damages are discounted to the date of injury, and then treated, on the "dollar is a dollar" principle, in the same way as immediate and historic damages with regard to prejudgment interest. The Utah Supreme Court has not addressed this issue, nor has the Tenth Circuit. In *Deakle v. John E. Graham & Sons*,[159] however, the Eleventh Circuit states exactly this proposition:

> Ideally, the stream of lost future income would begin with the date of Deakle's injuries, with no distinction being made between lost past wages and lost future wages. The next step would be to total the discounted installments and then add "interest" to the entire sum for the period between the date of injury and the date of trial.[160]

By adopting this reasoned approach, all of the above-described problems concerning discounting to the date of judgment would be eliminated. Specifically, the approach advocated by the Eleventh Circuit is consistent with fundamental

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[159] 756 F.2d 821 (11th Cir. 1985).
[160] *Id.* at 833.

economic precepts, and the stated goal of damages, which is to put the injured party in the same position they would have been in had the injury not occurred.

V. CONCLUSION

Legal rules are often designed to provide different incentives to plaintiffs and defendants. With regard to prejudgment interest, however, it is not clear why there should be a bias in either direction. Absent a convincing argument for leaning toward one party or the other, we conclude that as a normative matter, the ideal rule for prejudgment interest should be neutral with regard to delay: plaintiffs are compensated fully for delay and defendants pay the market rate for the benefits they implicitly derive from holding money that belongs to the plaintiff. This simple "neutrality rule" implies, of course, that all claims should be treated equally with regard to applying prejudgment interest; that there should not be a legislatively-set prejudgment rate or legislative mandating of simple, rather than compound, interest; and that prospective damages should be discounted to the date of injury and not the date of trial.

We conclude this Article with another admonition from the Eleventh Circuit: "Symmetrical treatment should be given to the estimated lost earnings both before and after trial so that neither party can benefit by delaying the final judgment."[161]

Utah could substantially reduce the problems and inconsistencies that derive from the current legal treatment of prejudgment interest if it were to adopt a simple principle: other than adding prejudgment interest, if a change in the trial date increases or decreases estimated damages, the methodology being used embeds an inconsistency concerning the treatment of time.

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[161] *Id.*