

# A 95-year corporate copyright is not constitutional

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## Overview

In the USA, the constitution gives Congress the authority to grant a copyright for a limited time. The purpose of this is clear from the context: economic benefits. Indeed, for corporations, economic benefits are the prime (arguably sole) motivation for any undertaking. An economic benefit can be regarded as a sequence of cash flows. In finance, the duration of a sequence of cash flows is not measured directly in years; rather, duration is calculated via a formula involving interest rates. At present, Congress has granted copyrights to corporations for terms of 95 years. The duration of 95 years is almost the same as the duration of perpetuity. Hence, 95-year copyright terms seem to be effectively not time-limited, which implies that such terms violate the constitution.

## Duration

Suppose that we will receive one dollar at the end of each year for the next  $n$  years, and assume that interest rates are fixed at 8% for all maturities. The *duration* of cash flows is commonly defined to be the weighted-average maturity of the cash flows; the weights are the present values of the cash flows divided by the total of all the present values. (In our case, the formula for the duration is thus  $\sum_{i=1}^n i 1.08^{-i} / \sum_{k=1}^n 1.08^{-k}$ .) For example, if  $n = 95$ , then we calculate that the duration is 13.44 years.

Some bonds never repay the principal; instead, they pay interest for perpetuity. With interest rates at 8%, if the interest payments (i.e. cash flows) were for perpetuity, then the duration of the cash flows is 13.50 years. (To calculate this, we take the limit, in the duration formula, as  $n \rightarrow \infty$ .)

The immediate conclusion from the foregoing is that *the duration of 95 years is over 99.5% of the duration of perpetuity*. Our analysis, though, made some assumptions. In particular, the cash flows were assumed to be constant: this seems to be very conservative. Additionally, interest rates were assumed to be 8%: the correct rate to use is the opportunity cost of capital for the corporation.

Estimating the opportunity cost of capital is difficult. Recently, though, the Chief Executive of Walt Disney Company was fired for poor performance. Walt Disney Company is a major corporation, which holds numerous copyrights, and it was one of the key backers of the congressional act that extended the term of corporate copyrights to 95 years. At the time of the firing, the Company's return on equity (the principal measure of performance) was over 8%. Moreover, other similar corporations have substantially higher returns on equity. Hence, 8% is demonstrably lower than the opportunity cost of capital. Thus the rate of 8%, used to calculate durations, is conservatively low.

## Discussion

The constitution states that a copyright must be for a "limited" time. Reasonable people, though, would agree that a copyright of a million years, while time-limited in some purely technical sense, would nonetheless violate the constitution. A one-year copyright obviously is time-limited. Thus, somewhere between one year and a million years must lie a threshold where time changes from limited to unlimited. Where is this threshold? There is no obvious way to demarcate it equitably. Even so, it seems clear that 95 years, at over 99.5% of the duration of perpetuity—indeed, well over, given the unreasonable-conservatism of the underlying assumptions—lies beyond the threshold.

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