Job Security and Draft Pick Discounting in the NFL

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Problem Statement

When NFL General Managers trade current draft picks for future picks, they face three interconnected risks:

1. **Survival Risk**: Probability they won't be GM when the future pick materializes
2. **Opportunity Cost**: Trading away immediate help reduces current-year wins, increasing firing probability
3. **Feedback Loop**: Lower performance → higher firing risk → lower value of future picks

This model provides a theoretical framework to quantify how GMs should discount future picks to account for these risks.

Theoretical Framework

In theory, draft picks as assets should have no inherent time discount: a pick in 2026 and a pick in 2029 should be equivalent in value, absent any risk factors. However, empirical observation clearly demonstrates that GMs heavily discount future picks when trading current picks for future picks. This discrepancy motivates the model presented here, which explains discounting through GM survival risk and opportunity cost rather than inherent asset depreciation. The model combines Expected Utility with Survival Probability and Dynamic Principal-Agent theory. The present value of a future draft pick is:

$$V(\text{future\_pick}_t) = S(t, w_0, \Delta w) \times \beta^t \times E[u(\text{pick\_value})] \tag{1}$$

where the discount factor is:

$$\text{Discount}(t) = S(t, w_0, \Delta w) \times \beta^t \tag{2}$$

The survival function $S(t, w_0, \Delta w)$ represents the probability the GM remains employed at time t:

$$S(t, w_0, \Delta w) = \exp\left(-\int_0^t \lambda(s, w(s))\, ds\right) \tag{3}$$

where the hazard function $\lambda(t, w)$ combines baseline tenure-dependent risk with performance-dependent risk:

$$\lambda(t, w) = \lambda_{\text{base}}(t) + \alpha \times \max(0, w_{\text{target}} - w(t)) \tag{4}$$

and $w(t) = w_0 - \Delta w \times \mathbb{I}(t = 0)$ captures immediate performance impact from trading the current pick.

Key Components

- $S_{\text{base}}(t)$: Baseline survival function from historical GM tenure data
- $\lambda_{\text{base}}(t)$: Baseline hazard function (tenure-dependent)
- $\beta \in (0, 1)$: Standard discount factor for time preference
- $\alpha > 0$: Performance sensitivity parameter

- w_{target}: Target win threshold below which firing risk increases
- w_0: Baseline win probability (without trade)
- $\Delta w < 0$: Change in win probability from trading away current pick

Economic Interpretation

The model captures two forms of discounting: (1) **Time Preference**: Standard exponential discounting β^t reflects pure time preference; (2) **Survival Risk**: The survival function $S(t, w_0, \Delta w)$ reflects job security risk, which depends on both tenure and current performance. The performance-dependent hazard creates a feedback loop: trading away immediate help reduces current wins, which increases firing probability, further reducing the value of future picks.

Model Properties

Discount factor decreases monotonically with time horizon t; discount increases (present value decreases) as opportunity cost $|\Delta w|$ increases; discount increases when baseline performance w_0 falls below target w_{target}; the model reduces to standard exponential discounting if survival probability is constant; performance impact is immediate and persistent (captured by indicator function).

Job Security and Win Expectations: Four Scenarios

The model demonstrates how job security and win expectations interact to create heterogeneous discount factors. Consider four GMs trading a current pick for a future pick at time horizon t:

Example 1: High Security, High Expectations

Characteristics: Established GM with strong ownership support, recent success, and low baseline hazard, leading a contending team in "win-now" mode. Parameters: $\lambda_{\text{base}}(t)$ is small (low firing risk), α is small (performance has minimal impact on survival), $w_0 \gg w_{\text{target}}$ (baseline performance well above threshold).

Implications: The survival function $S(t, w_0, \Delta w)$ remains high even as t increases. The hazard function $\lambda(t, w)$ is dominated by the small baseline term, with minimal contribution from performance penalties. The discount factor $\text{Discount}(t) = S(t, w_0, \Delta w) \times \beta^t$ is primarily determined by time preference β^t, with survival risk contributing relatively little additional discounting.

Countervailing Factor: However, this GM leads a contending team that needs immediate help. The opportunity cost Δw of trading away current picks is high because immediate wins are valuable for contention. This creates a tension: while survival risk is low (favoring future picks), opportunity cost is high (favoring current picks).

Behavioral Prediction: Despite low survival risk, this GM may still prefer current picks due to high opportunity cost from trading away immediate help needed for contention.

Example 2: High Security, Low Expectations

Characteristics: First-year GM taking over a bad team in rebuild mode, with strong ownership support and explicit rebuilding mandate. Parameters: $\lambda_{\text{base}}(t)$ is small (low firing risk due to rebuild expectations), α is small (performance has minimal impact on survival during rebuild), $w_0 \ll w_{\text{target}}$ (baseline performance well below threshold, but this is expected).

Implications: The survival function $S(t, w_0, \Delta w)$ remains high because ownership expects poor performance during rebuild. The hazard function $\lambda(t, w)$ is dominated by the small baseline term, with performance penalties inactive since rebuild expectations protect against firing. The discount factor is primarily determined by time preference β^t.

Opportunity Cost: This GM faces low opportunity cost Δw because immediate wins are not valuable for a rebuilding team. The team doesn't need immediate help, so trading current picks for future picks has minimal impact on current-year performance expectations.

Behavioral Prediction: This GM is the ideal candidate for trading current picks for future picks: maximum job security (low survival risk) combined with low opportunity cost (rebuilding team doesn't need immediate help). Future picks retain maximum present value because both survival risk and opportunity cost are minimized.

Example 3: Low Security, High Expectations

Characteristics: GM on the hot seat with weak ownership support, recent struggles, leading a team with high win expectations (contending roster but underperforming). Parameters: $\lambda_{\text{base}}(t)$ is large (high firing risk), α is large (performance strongly impacts survival), $w_0 \leq w_{\text{target}}$ (baseline performance at or below threshold despite high expectations).

Implications: The survival function $S(t, w_0, \Delta w)$ decays rapidly as t increases. The hazard function $\lambda(t, w)$ combines high baseline risk with substantial performance penalties. Trading away current picks ($\Delta w < 0$) further increases hazard through the term $\alpha \times \max(0, w_{\text{target}} - w(t))$, creating a feedback loop. The discount factor $\text{Discount}(t)$ reflects both time preference and severe survival risk.

Opportunity Cost: This GM also faces high opportunity cost Δw because the team needs immediate help to meet expectations and save the GM's job. Trading away current picks directly threatens both team performance and job security.

Behavioral Prediction: This GM heavily discounts future picks due to severe survival risk. Additionally, high opportunity cost makes trading current picks extremely costly. The combination creates the strongest preference for current picks: future picks are heavily discounted and current picks are desperately needed.

Example 4: Low Security, Low Expectations

Characteristics: GM on the hot seat with weak ownership support, recent struggles, leading a rebuilding team with low win expectations. Parameters: $\lambda_{\text{base}}(t)$ is large (high firing risk), α is large (performance strongly impacts survival), $w_0 \ll w_{\text{target}}$ (baseline performance well below threshold, matching low expectations).

Implications: The survival function $S(t, w_0, \Delta w)$ decays rapidly as t increases due to high baseline hazard. The hazard function $\lambda(t, w)$ combines high baseline risk with performance penalties, though these may be somewhat mitigated if ownership has low expectations. The discount factor $\text{Discount}(t)$ reflects both time preference and severe survival risk.

Opportunity Cost: This GM faces low opportunity cost Δw because immediate wins are not valuable for a rebuilding team. However, the low opportunity cost does not offset the severe survival risk from high baseline hazard.

Organizational Risk: This scenario is the most dangerous from an organizational perspective. The GM's incentive to heavily discount future picks makes sense from their personal perspective (to win games and avoid being fired), but it directly conflicts with organizational principles of a rebuild. The organization benefits from accumulating future draft capital during a rebuild, but the GM's survival incentives push them toward prioritizing current picks, potentially sacrificing long-term organizational value for short-term job security.

Behavioral Prediction: This GM heavily discounts future picks due to severe survival risk, despite low opportunity cost. The high baseline hazard dominates, making future picks worth substantially less in present value terms. Low opportunity cost provides little relief because survival probability drops sharply regardless of performance.

Comparative Analysis and Strategic Implications

The four examples demonstrate that discount factors are not uniform across GMs but rather depend on the interaction of job security and opportunity cost. This heterogeneity has profound implications for draft strategy. Teams approaching the draft must recognize that their GM's valuation of future picks depends critically on their position in the job security–expectations space. Understanding these principles allows teams to identify optimal trade partners, anticipate counter-party behavior in negotiations, and structure contracts to align GM behavior with organizational objectives.

The model reveals a fundamental principal-agent problem in NFL front offices. The principal (ownership) seeks to maximize long-term organizational value, while the agent (GM) maximizes their own utility, which includes job security. This misalignment is most severe in Example 4, where the GM's survival incentives directly conflict with organizational rebuild principles. The hazard function $\lambda(t, w)$ captures this tension: performance-dependent firing creates incentives for short-term optimization that may sacrifice long-term value. Ownership must design incentive structures that align the GM's discount factor with organizational objectives through explicit contracts that extend GM tenure during rebuilds (reducing $\lambda_{\text{base}}(t)$), performance metrics that reward long-term asset accumulation, and organizational commitment mechanisms that credibly signal tolerance for short-term performance during rebuilds (reducing α when $w_0 < w_{\text{target}}$).

The model's fundamental contribution is demonstrating that *job security risk and opportunity cost interact multiplicatively* to create heterogeneous discount factors across GMs. This heterogeneity explains observed variation in draft pick trading behavior and reveals that optimal draft strategy requires understanding not just pick values, but the incentive structures that govern how GMs value future picks. Organizations that align GM incentives with organizational objectives, moving toward Example 2 during rebuilds, can maximize long-term value creation. Those that fail to achieve alignment, remaining in Example 4, risk sacrificing organizational value for short-term GM survival. The alignment between front office and ownership is therefore not merely desirable but essential for long-term organizational success.