Ross-Arctos Sports Franchise Index (RASFI): Sports Asset Class Returns Over the Long-Term

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Introduction

Ross-Arctos Sports Franchise Index (RASFI) represents the first-ever purely data-driven benchmark of investment performance of North American sports franchise assets. RASFI serves sports industry investors, asset owners, league and team executives, and the wider sports business community as a universal standard for investment performance in the largest North American leagues (the "Big Four"): Major League Baseball (MLB), National Basketball Association (NBA), National Football League (NFL), and National Hockey League (NHL).

Sports franchises are privately held assets that trade in an opaque, illiquid market. Recognition of sports franchises as an alternative asset class, akin to private equity, venture capital, or infrastructure, has brought increased focus from investors and allocators on the drivers of sports franchise valuations. We hope RASFI furthers this understanding.

We separately review the dataset and methodology behind the index in detail in our methodology overview. **In this piece, we tackle what we view as the main takeaways for long-term investors and allocators interested in sports franchise investments.**

Risk vs. Return for Sports

A major theme in our prior research about the asset class is what we've labeled the 'resilience of sports'. Put simply, one would expect franchise values to correlate strongly with many other, ordinary businesses exposed to similar economy-wide and market-specific shocks. After all, franchise economics are driven by consumer spending on tickets, advertiser spending on sponsorships (itself derivative of consumer spending), and media company demand for content rights (again, a function of advertising and direct consumer spending). **However, what we have observed again and again is that, while notionally true, spending by consumers on premium sports content appears to represent a particularly sticky form of demand.**

RASFI supports the case for resilience in several ways.

First, we observe that **franchise valuations exhibit low volatility given their level of historical return** and are especially resilient around times of distress.

Going back to Q1-1961, here's how RASFI stacks up against the overall U.S. equity market (as proxied by the Fama French total stock market return) (Figure 1). Performance has been 2.5% better than equities per year over this period, with lower volatility and lower measured betas and correlations.

Figure 1.

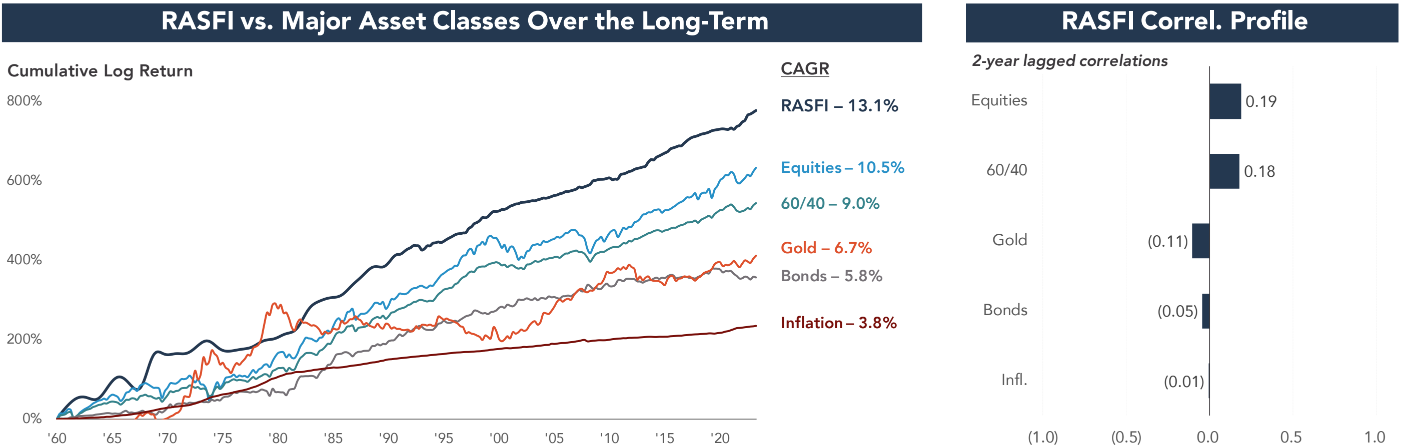
	Full Sample		First Half - Q1-61:Q2-92		Second Half - Q3-92:Q1-24	
Asset Class	**Sports**	**U.S. Equities**	**Sports**	**U.S. Equities**	**Sports**	**U.S. Equities**
Proxy:	*RASFI*	*Fama-French Mkt*	*RASFI*	*Fama-French Mkt*	*RASFI*	*Fama-French Mkt*
Annual Return	13.09%	10.54%	14.42%	10.50%	11.78%	10.57%
Annual Volatility	8.47%	18.82%	10.40%	19.18%	6.00%	18.46%
Excess Return (minus 1-month T-Bill)	8.36%	5.92%	7.50%	3.81%	9.22%	8.05%
Sharpe Ratio	0.986	0.314	0.721	0.199	1.537	0.436
Naïve Regression (No Lags)						
Market Beta	0.0004	1.0000	(0.0244)	1.0000	0.0207	1.0000
Annual Alpha	7.8%***	0.0%	7.3%***	0.0%	8.7%***	0.0%
Unadjusted R^2	0.0000		0.0019		0.0037	
With 12 Quarterly Lags						
Sum of Lagged Betas	0.4933	1.0000	1.1141	1.0000	0.1787	1.0000
Annual Alpha	5.0%***	0.0%	2.1%	0.0%	7.9%***	0.0%
Unadjusted R^2	0.1121		0.1873		0.2105	
Correlation w/ Equities[1]	0.1898	1.0000	0.1847	1.0000	0.2830	1.0000
Max Drawdown	(27.2%)	(46.4%)	(27.2%)	(46.4%)	(10.4%)	(45.1%)
Max Drawdown Dates	Mar-68	Sep-74	Mar-68	Sep-74	Dec-93	Sep-02

Source: Arctos, U. Michigan Ross, Ken French. As of May 2024. * = significant at the 10% level; ** = 5% level; *** = 1% level.
(1) Calculated on a 2-year lag. (Contemporaneous correlation is ~0.)

The index exhibits no correlation with equities contemporaneously; instead, correlation and betas only "show up" on a long, 2-3-year lag. We find equity market betas that are very low – roughly 0.5 over the entire sample and 0.2 in more recent decades using three years of lagged regressors. Correlations range in the 0.2-0.3 range. We believe RASFI exhibits this long lag time for two reasons. First, we believe sports franchise valuations are a function of *recently liquidated* net worth among prospective buyers. (Franchises are rarely bought with non-cash consideration.) Hence, we would expect that franchise values today are a function of past equity prices, which is when business exits are most likely to have spiked. Second, our methodology will naturally introduce some smoothing, since, at each quarter, we must use a long-enough window of recently completed transactions to inform our current estimate of intrinsic value for the average franchise. However, we believe this approach precisely mirrors how actual buyers assess franchises and transact in the marketplace: the predominant valuation methodology is private transaction comps, weighted to more recent data, on a revenue multiple basis, which is exactly what our model is doing to produce its estimate of the average franchise value (though with, in our view, better precision and a more comprehensive dataset).

Overall, long-term performance vs. equities and other classical asset allocation options (stocks, bonds, commodities, and cash) is strong, with an attractive, sub-0.2 correlation profile across each (Figure 2). Our view is not just a function of the time-period we selected. Using just the more recent half of our sample, starting in mid-1992, we see less absolute outperformance for sports assets, but also meaningfully lower volatility and market betas (Figure 1).

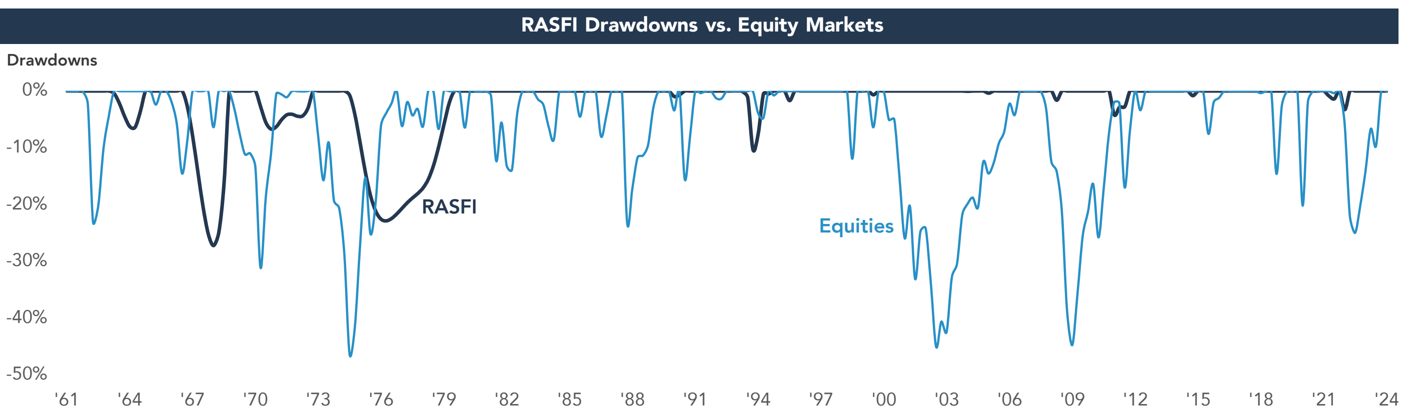
Figure 2.



Source: Arctos, U. Michigan Ross, Ken French, Robert Shiller. As of May 2024.

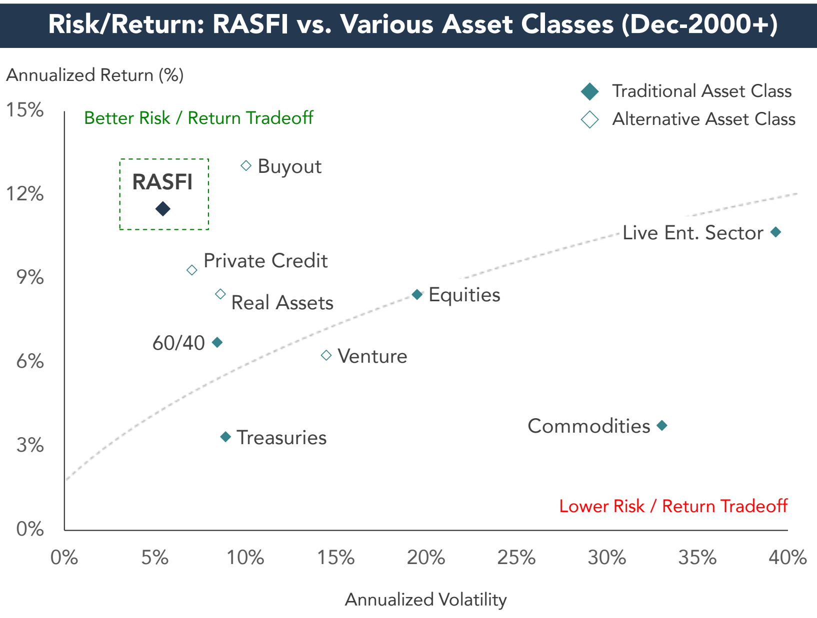
We believe that long-term market performance and drawdown experience also points to meaningful macro resilience (Figure 3). Drawdowns for a sports team owner during the early-2000s tech crash and the 2008-09 Great Financial crisis were minor or non-existent relative to those experienced by the typical equity market investor. We believe this is fundamentals-driven: especially during the tech crash, valuation multiples (EV/revenue) were roughly constant before, during, and after the macro event in question; demand as reflected in actual transaction data was not strongly impacted by macro events that rocked equities overall.

Figure 3.



Source: Arctos, U. Michigan Ross, Ken French. As of May 2024.

Figure 4.



Source: Arctos, U. Michigan Ross, S&P, Ken French, Robert Shiller, MSCI (Burgiss). As of May 2024. Buyout, Venture, Private Credit, and Real Assets are the comparable time weighted return series from MSCI/Burgiss for North America / Buyout, Venture, Debt, and Real Assets respectively. Live Entertainment Sector is represented by the monthly total returns of Fama-French 'Fun' Industry portfolio (49 industry cut). Commodities is represented by the S&P GSCI. Dotted line represents an illustrative efficient frontier between equities and cash (average cash rate at 1.5% over the period).

Finally, we compare RASFI risk vs. return to other comparable asset classes (Figure 4). (Here we must use a narrower, more recent sample to include as wide an array of investment verticals as possible.) RASFI clearly demonstrates strong results, achieving better volatility than private credit (and even 10-year Treasuries, at least over this time-period) but returns in-line with the net-of-fee returns achieved by Buyout funds. We also pulled Live Entertainment (or using Fama-French industry tags, "Fun") sector returns and found similar total returns over this period (11.5% for RASFI vs. 10.7% for the comparable public stocks) but significantly higher volatility – even higher than commodity prices, which are classically one of the most cyclical assets. We believe general live entertainment and recreation business models do not share the same resiliency characteristics enjoyed by premium sports franchises, which opens them up to particularly painful, sudden demand shocks (post-GFC and COVID-19 in particular) that drive both long-term volatility and a high, long-term risk premium. (Case in point: look at the price history of any cruise line stock!)

What Drives Sports Franchise Returns Over the Long-Term?

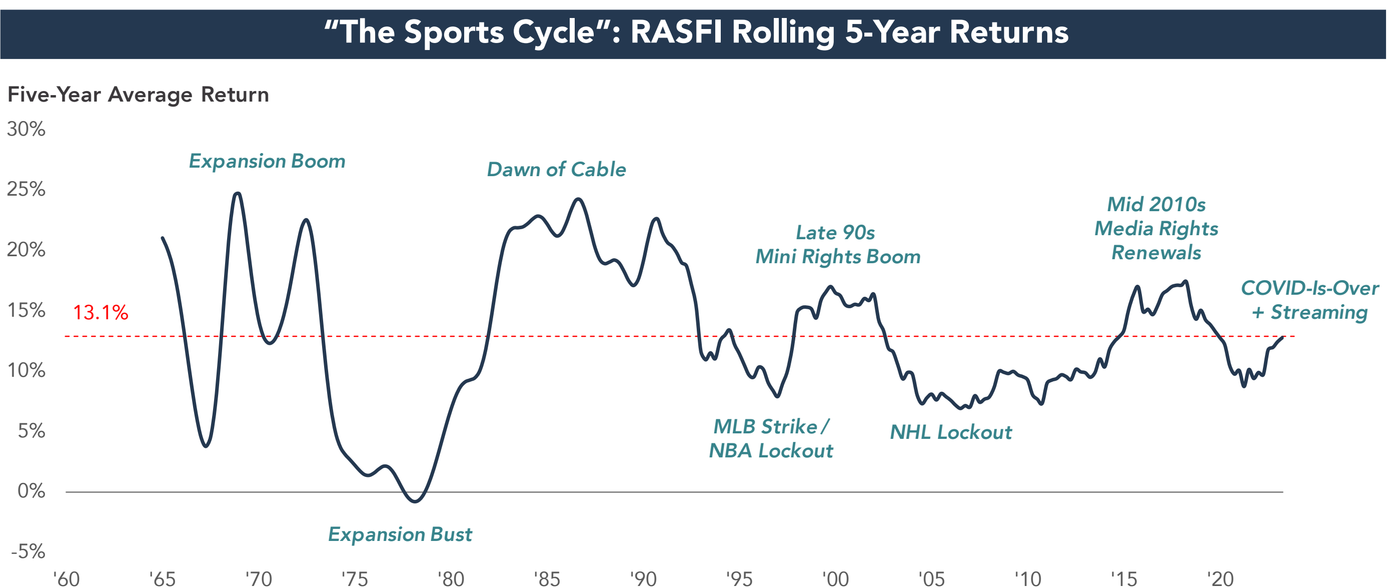
RASFI provides a uniquely long-term look into the history of sports franchise prices. From this vantage point, it can be useful to assess what does and does not appear to driving pricing over time.

As mentioned, correlations with the broader stock market are fairly low. But that doesn't mean there is no "cycle" in sports. Cyclicality in sports transaction values is primarily driven by the two major, "one-time" event types that regularly occur in professional sports: media rights contract renewals and CBA negotiations. Figure 5 represents our best guesses for major drivers of each large move up and down in pricing over the sports cycle, using five-year trailing RASFI returns as our cycle proxy. Rarely does pricing actively decline over five-year periods. However, there have been several regime changes in sports asset values. For example:

- Returns from the mid-60s on were heavily influenced by a large number of new expansion teams across the Big Four (21 in the 1960s vs. 13 in the 1970s and only 4 in the 1980s);
- This likely created a supply shock by the late 1970s, which, coupled with a complicated macro environment (multiple recessions) created one of the deepest market troughs in our entire sample;

- By the 1980s, cable or pay television was beginning to mature, and the modern sports media rights contract as we know it today was born, resulting in major economic shifts to the Big 4;
- Similar booms in the media business occurred in the late 1990s and mid-2010s; the former a product of the telecom boom, and the latter a product of the early innings of cable bundle churn, which raised the real value of content for distributors and networks considerably.
- In the interim, several labor relations difficulties across several Big Four leagues impacted the overall index, though not substantially (the value of diversification!).
- Now, we're seeing valuations tick up again, which we view as the two-pronged impact of COVID-19 activity resumption and renewed optimism about the live entertainment business, combined with significant continued tailwind on media rights, driven by streaming demand and media industry fragmentation.

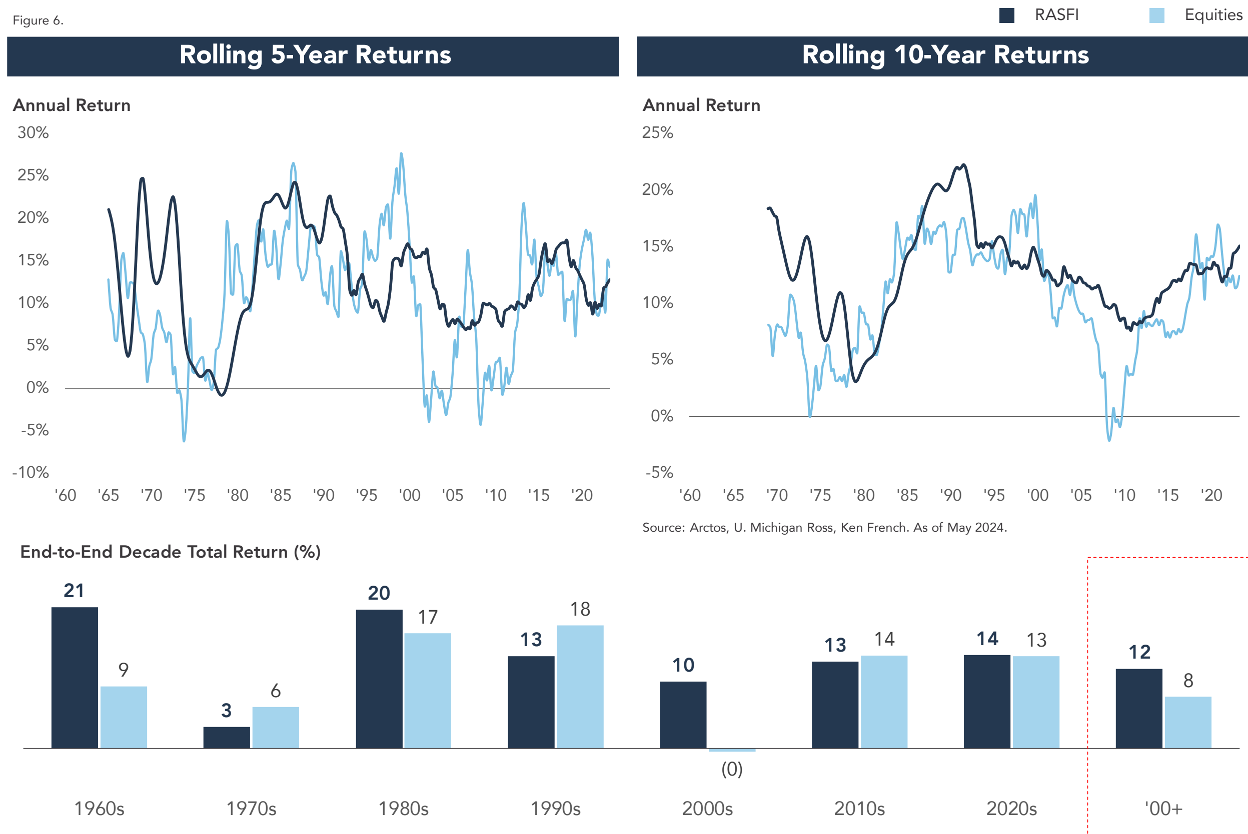
Figure 5.



Source: Arctos, U. Michigan Ross, Ken French. As of May 2024.

How related are some of these events to overall market returns? Somewhat, especially when looking at longer-term cycles. We observe some correlation – again, on a lag – to the overall equity market cycle (Figure 6), though with two caveats that favor sports: (1) sports did not experience major "bear markets" at all post-1980, even during the GFC; (2) sports did not participate in – nor did it suffer any "hangovers" from – the two major technology bubbles in our sample: the late 1990s internet and telecom boom and early 2020s SaaS/crypto bubble. If anything, sports valuations appeared to benefit from the tech rally in the late 1990s but did not experience a commensurately poor period of returns in the following years after the crash. In the 2020s run-up, sports valuations were subdued due to uncertainty related to the ongoing COVID-19 disruption. Hence, sports valuations appear to enjoy the positive effects of increasing stock prices and overall wealth – significant "up-cycles" – without commensurately painful "down-cycles" (Figure 6).

Figure 6.



Source: Arctos, U. Michigan Ross, Ken French. As of May 2024.

Finally, we point to the positive long-term growth in overall live entertainment or "experience economy" sector. As we have reviewed elsewhere, experience economy sector inflation tends to outpace economy-wide inflation by a meaningful margin. This also feeds into experience economy stocks, as well as professional sports franchises. We observe a remarkably close, long-term fit between the Fama-French so-called "Fun" industry portfolio total returns[1] and RASFI since 1960 (Figure 7). While returns are fairly similar, volatility is clearly lower for RASFI; but the long-term fit hints at a common factor driving returns, **which we view as the premium associated with live, in-person or experiential entertainment spending over less differentiated entertainment substitutes**.

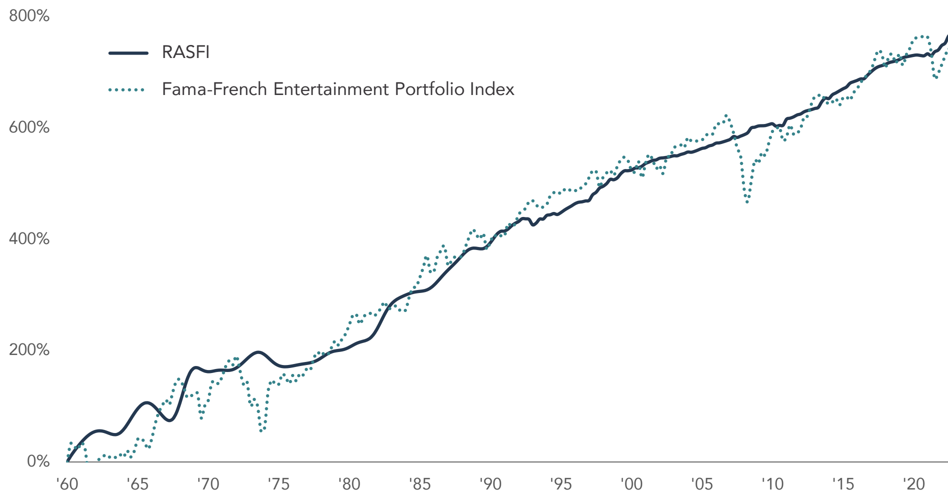
In short, we identify three major drivers of long-term returns: (1) major, one-time demand shocks, historically driven by media rights renewals; (2) long-term wealth accretion in the economy overall, reflected in aggregate stock price increases over the long-term, through with more muted effects on sports valuations during short-term equity market stress; (3) a long-term live entertainment or "experience economy" industry factor, though again, the ride is "less bumpy" in premium sports.

[1] Includes the following SIC codes: 7800-7829 Services - motion picture production and distribution; 7830-7833 Services - motion picture theaters; 7840-7841 Services - video rental; 7900-7900 Services - amusement and recreation; 7910-7911 Services - dance studios; 7920-7929 Services - bands, entertainers; 7930-7933 Services - bowling centers; 7940-7949 Services - professional sports; 7980-7980 Amusement and recreation services; 7990-7999 Services - Misc entertainment.

Figure 7.

RASFI vs. Experience Economy ("Fun") Stocks

Cumulative Log Return



Source: Arctos, U. Michigan Ross, Ken French. As of May 2024. "Fun" industry portfolio includes the following sectors / SIC codes: 7800-7829 Services - motion picture production and distribution; 7830-7833 Services - motion picture theaters; 7840-7841 Services - video rental; 7900-7900 Services - amusement and recreation; 7910-7911 Services - dance studios; 7920-7929 Services - bands, entertainers; 7930-7933 Services - bowling centers; 7940-7949 Services - professional sports; 7980-7980 Amusement and recreation services; 7990-7999 Services - Misc entertainment.

Conclusion

RASFI is a first-of-its-kind quantitative tool for producing data-driven insights about the long-term risk and return profile of premium sports properties in North America. In our view, a universe of investible instruments deserves recognition as an "asset class" on three grounds:

1. The returns in question are difficult to replicate with other those of other asset classes.
2. The potential for portfolio diversification enhancement or meaningful long-term returns relative to the observed risk is provable with high quality data.
3. The segment is investible at scale today (though it may not have been previously).

We believe RASFI helps make a strong case for sports in North America as an investible asset class worthy of consideration by long-term investors.

Disclosure: The Ross-Arctos Sports Franchise Index ("RASFI") is provided for informational purposes only and does not constitute an offer to sell or a solicitation of an offer to purchase any security. RASFI includes data sourced from third parties and reflects market trends and economic forecasts which Arctos Partners, LP ("Arctos") and Stephen M. Ross School of Business at the University of Michigan ("Ross") believe to be reliable; however, no independent verification has been conducted, and neither Arctos nor Ross warrants the accuracy, fairness, correctness, or completeness of any information provided. Certain statements included herein may be considered forward-looking and involve risks and uncertainties; actual results could materially differ from those projected. Historical trends indicated in RASFI do not assure or imply the continuation of such trends in the future. RASFI estimates historical sports team valuations based on a series of statistical models that may introduce sources of error. While we believe RASFI reflects past estimates of sports team values, they should not be seen as indicative of future performance or profitability. The benchmarks and indices provided herein were selected by Arctos and Ross for illustrative purposes only. Selection of such benchmarks or indices is inherently subjective and others might select other benchmarks or indices based on their assessment of the market. Actual results may differ, perhaps materially, from the trends presented herein.