



## The Sun Sport feature: Premier League players who have never been sold in a transfer window. Objectively, how good are they really; and how valuable are they to their clubs?

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### 1. The Headlines

- **Matty Longstaff's** contract is reportedly expiring at the end of this current season. His *Intrinsic Value* to **Newcastle United** is **£23.28m** – that is the monetary value of his contribution to increasing the probability of Newcastle winning matches during Season 2019/20. It would suggest that Newcastle need to get him signed-up on a new contract ASAP. (PS. This is an exceptional insight for Longstaff's agent in those negotiations!)
- There has previously been speculation that **Arsenal** might be interested in **Matty Longstaff**, and, without wishing to assist his agent any further, **Matty Longstaff's Intrinsic Value** if he was playing at **Arsenal** would be **£34.07m**.
- Interestingly, **Manchester United** are reported to have shown strong interest in **Sean Longstaff** in the last transfer window (with a figure of **£50m** frequently mentioned), but **Sean's** performances this season have been a massive **43%** below those of **Matty**.
- **Sean Longstaff's Intrinsic Value** for **Newcastle** is only **£18.81m** – which is considerably lower than the speculated **£50m** interest from **Manchester United**. Indeed, his current *Intrinsic Valuation* to **Manchester United** is now only **£30.92m**.
- **Jack Grealish** has the highest *Carteret Rating* of any of the players on the list (**343.2**). This is an objective measure of how good he is in the Aston Villa team. His *Intrinsic Value* to **Aston Villa** is **£37.05m**; and his *Intrinsic Value* to **Manchester United** (there has obviously been much speculation about a possible transfer to Manchester United) would be **£71.38m**.
- This is very close to the speculated transfer fee (**£75m**) that Manchester United might be prepared to pay for **Jack Grealish**. It would suggest that at £75m Aston Villa would be getting fantastic value from the sale of Grealish; whilst Manchester United are, once again, paying a sum that is about equal to the player's *Intrinsic Value*.
- This has been typical of **Manchester United's player transfer strategy** over the last few seasons – they tend to buy players at their *Intrinsic Value* (to Manchester United), or, even, pay a transfer fee in excess of the player's *Intrinsic Value*. Clubs such as **Liverpool** or **Manchester City** have been much better at buying players for transfer fees below the player's *Intrinsic Value*.
- A good example might be **Ben Chilwell**. His *Intrinsic Value* for **Leicester City** is **£34.12m**, and there is speculated interest from Manchester City and Chelsea. **Manchester City** are speculated to be

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offering a transfer fee of **£35m** – which is very close to Chilwell's *Intrinsic Value* to Leicester City, but, perhaps smartly, significantly below his potential *Intrinsic Value* to **Manchester City (£53.20m)**.

- **Chelsea**, on the other hand, are reportedly prepared to offer **£50m** for **Chilwell**. This would represent good value for **Leicester City (£16m** more than his *Intrinsic Value* to Leicester), but not especially good value to Chelsea because Chilwell's *Intrinsic Value* to **Chelsea** is **£49.29m**.
- **Harry Kane** has also performed well this season, with a *Carteret Rating* of **340.5**. This equates to an *Intrinsic Value* to **Tottenham** of **£66.38m**. Again, **Manchester United** are speculated to be interested in buying him, with figures quoted in the media **in excess of £100m**.
- **Harry Kane's Intrinsic Value** to **Manchester United** is **£78.69m**, and this would suggest – as also mentioned above – that **Manchester United would be significantly overpaying for Harry Kane if they paid a transfer fee in excess of £100m**. It would be great business for Daniel Levy at Tottenham though!
- The Arsenal players in the list have not performed as well as the Chelsea players, and the *Intrinsic Values* reflect this difference. The slight exception is **Ainsley Maitland-Niles** who has performed objectively better than many of his team-mates, but, ironically, has been speculated to be sold in the forthcoming transfer window to help fund a new contract for **Pierre-Emerick Aubameyang**.
- **Maitland-Niles' Intrinsic Value** to **Arsenal** is **£30.27m**, but the speculation is that Arsenal are possibly looking to sell him for **£20m**.
- Some Arsenal supporters might consider that **£20m** is too high for a player that appears to have fallen out of favour under **Mikel Arteta**, but the *Carteret Rating* is a pure objective measure of the player's contribution to his team winning matches – and does not lie. This is perhaps an example of how subjective assessments of a player do not actually give you complete insights on his ability.
- A similar example of subjective opinions exceeding the objective/actual contribution that a player makes to his team winning matches is **Trent Alexander-Arnold**. **Liverpool** have won a lot of matches so far this season, and **Alexander-Arnold** has played well (with a *Carteret Rating* of **299.3**). However, his contribution to **Liverpool** winning matches this season is not as high as the market (and many supporters) might think.
- This is reflected in a 'market value' for **Trent Alexander-Arnold** of **c.£90m**, whereas his *Intrinsic Value* to **Liverpool** is less than half of that figure at **£40.92m**. He is obviously surrounded by numerous players at **Liverpool** that are performing exceptionally well this season, and that will impact his *Intrinsic Value*.
- It was also recently reported that the **Academy Director at Liverpool** indicated (slightly tongue-in-cheek, perhaps) that his place might be under 'pressure' next season from **Neco Williams**.
- Other notable observations include **Phil Foden** needing more game time with **Manchester City** before his performance potential can be fully assessed; **Tom Davies** looks to have more objective performance at **Everton** than supporters might perceive; **Jesse Lingard** has performed poorly this year, but **Manchester United** should not 'panic sell' him; **James Ward-Prowse** is incredibly undervalued in the market; **Declan Rice** is overvalued in the market; and the **Manchester United** youngsters of **Mason Greenwood** and **Brandon Williams** have still got plenty to prove.

## 2. **The list of players who have never been sold in a transfer window, and their *Carteret Rating*, *Intrinsic Value* and *Estimated Market Value***

The table in Exhibit 1 includes all the players in the list provided by Simon Rice. It incorporates each player's *Carteret Rating* and *Intrinsic Value* for the current 2019/20 season, together with an 'Estimated Market Valuation' (taken from *Transfermarkt* on 12 June 2020). Any estimate of market value should be considered with caution, because the market value is what the market (or the ultimate buying club) will eventually pay. However, it is at least a means of comparison.

Note: There are no figures in the table for Ruben Loftus-Cheek (who has not played any games this season) or Kyle Walker-Peters (whose number of minutes played are below the material threshold for the analysis).

Exhibit 1: Table illustrating players' *Carteret Rating* and *Intrinsic Value* for Season 2019/20

Player Name	Current Club	Carteret Rating (2019/20)	Intrinsic Value (2019/20)	Estimated Market Value
Ainsley Maitland-Niles	Arsenal	211.0	£30.27m	£13.05m
Bukayo Saka	Arsenal	182.8	£19.24m	£18.00m
Reiss Nelson	Arsenal	129.6	£16.12m	£11.25m
Joe Willock	Arsenal	119.0	£14.80m	£14.40m
Jack Grealish	Aston Villa	343.2	£37.05m	£27.45m
Fikayo Tomori	Chelsea	307.4	£43.33m	£14.40m
Tammy Abraham	Chelsea	270.8	£38.17m	£36.00m
Mason Mount	Chelsea	250.7	£32.99m	£36.45m
Ruben Loftus-Cheek	Chelsea	-	-	£21.60m
Reece James	Chelsea	193.9	£23.70m	£20.25m
Callum Hudson-Odoi	Chelsea	160.3	£18.08m	£28.35m
Tom Davies	Everton	160.2	£20.67m	£14.40m
Ben Chilwell	Leicester City	269.3	£34.12m	£36.00m
Trent Alexander-Arnold	Liverpool	299.3	£40.92m	£89.10m
Phil Foden	Manchester City	173.1	£21.93m	£24.30m
Marcus Rashford	Manchester United	314.8	£45.95m	£57.60m
Jesse Lingard	Manchester United	127.7	£24.84m	£15.75m
Brandon Williams	Manchester United	180.7	£21.10m	£9.90m
Mason Greenwood	Manchester United	162.0	£17.33m	£26.10m
Matty Longstaff	Newcastle United	235.9	£23.28m	£3.24m
Sean Longstaff	Newcastle United	165.1	£18.81m	£15.75m
James Ward-Prowse	Southampton	276.5	£32.77m	£13.05m
Harry Kane	Tottenham	340.5	£66.38m	£108.00m
Kyle Walker-Peters	Tottenham	-	-	£7.20m
Harry Winks	Tottenham	228.1	£40.03m	£28.80m
Declan Rice	West Ham United	247.9	£26.84m	£44.55m

### 3. A little bit of science...

At Carteret Analytics we have developed the quantitative analysis utilised to good effect in investment banking for trading strategy, portfolio optimisation, derivatives pricing and hedging, and risk management by our sister corporate finance firm, Carteret Capital - and applied it to football.

**In particular, our work provides an objective measure of how good a football player really is - removing all the subjective noise and opinions.**

An integral part of the analysis is to calculate a ***Carteret Rating***<sup>4</sup> for every football player, which rates and values a player's contribution to his team winning football matches. It is incredibly accurate at predicting a player's capabilities. Indeed, we always start with the premise that a professional football club's primary objective is to win matches - and therefore the more a player contributes to his team winning matches, the better the player.

Carteret Analytics has also extended the *Carteret Rating* to give each player an ***Intrinsic Value*** (in monetary terms). This is essentially the value of the player 'in use' - the monetary value of his contribution to his club winning football matches. It is a sophisticated financial calculation - utilising proprietary algorithms - and which can be applied to and by other clubs. This enables, for example, a prospective buying club to virtually (yet objectively) 'transplant' a player into its own team to determine his potential *Intrinsic Value* for the buying club. Once the prospective buying club has this information, it can help inform them of the appropriate transfer fee to offer to the player's current club.

#### 4. Side Note: The distinction between *Carteret Rating* and *Intrinsic Value*

##### **Carteret Rating**

This is a completely objective measure. It only takes account of a player's performance metrics, and analyses these metrics utilising a proprietary algorithm to determine how good a player really is - and predict how he will perform in the future.

It ignores characteristics such as age and nationality, and avoids the 'noise' of subjective considerations that are often taken into account (often wrongly) in trying to determine the quality of a player.

It is an exceptionally accurate rating, with an *r-squared value* of **0.89** for Premier League players - demonstrating that it is very precise at predicting how good a player will be in the future. It is also a dynamic measure, allowing us to accurately predict the impact of the player in different clubs and different leagues.

##### **Intrinsic Value**

This is a proprietary monetary measure of the player's objective performance. In other words, it monetises a player's *Carteret Rating*.

It is incredibly useful to a club because it allows them to compare a player's intrinsic value to his market value. For instance, if a player's *Intrinsic Value* is £10m and a club is offering £20m to buy him, then this would strongly suggest that his current club should sell him.

Of course, if you are the buying club then you will also benefit enormously from an insight into what that player's *Intrinsic Value* might be if he were to join the buying club. If his *Intrinsic Value* for the buying club is £25m, then it suggests that a purchase price of £20m also offers good value for the buying club.

This also illustrates that a player's *Intrinsic Value* can vary between clubs. It is obvious that this should be the case because the context for valuing that player will be different at each club - the quality and

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<sup>4</sup> *Carteret Rating*: this is a proprietary method of determining how good a player really is. It is a significant and leading-edge algorithm. We assess a player by identifying every match in which he has been involved (for which we have data) and identifying the key events in each and every one of those matches. These Key Match Events ("KMEs") are events that led to a goal being scored; could have led to a goal being scored; led to a goal being conceded; or could have led to a goal being conceded. Then, for each and every KME, in each and every single match, we analyse that player's contribution to each of those KMEs. This is a substantial piece of analysis, and one which produces a unique *Carteret Rating* for the player. It is a dynamic rating, and it changes with each additional match played.

performance levels of the other players at the other club, the quality and performance of the coaching staff, the 'best fit' analysis of that player into preferred and optimal formations at the other club, the league and league position of the other club, the player's projected value as an intangible asset as part of the enterprise/corporate value of the other club, the cost/benefit analysis (including opportunity cost) of the other club with and without that player etc.

It is important to note that it is unlikely that both clubs - the selling and buying club - will have access to the *Carteret Rating* or *Intrinsic Value*. This provides a substantial competitive advantage to the club that does have access to these measures, because it will help that club successfully negotiate the best possible price for the player whilst ensuring (in the case of the selling club) that the player is not sold for a price lower than his *Intrinsic Value* to the selling club; or (in the case of the buying club) that the player is bought for a price lower than his *Intrinsic Value* to the buying club

## **5. About Carteret Analytics**

Carteret Analytics is part of the Carteret Group of companies, based in the City of London, New York and Geneva. It provides leading-edge quantitative analysis and commercial analytics to clients worldwide, with particular expertise in the sports sector. In football our work includes player rating and valuation, head coach assessment, team performance analysis, and applying proprietary analytics to transform commercial revenues.

**Carteret Analytics, London**  
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