



# Quota allocation mechanisms

**Report to New Zealand Meat Board**

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## Definitions

<b>BBBEE</b>	Broad-based black economic empowerment
<b>EU</b>	The European Union
<b>EU WTO HQB</b>	European Union and United Kingdom World Trade Organisation High Quality Beef
<b>EU WTO SG</b>	European Union and United Kingdom World Trade Organisation Sheepmeat and Goatmeat
<b>FCFS</b>	First-come, first-served
<b>FTA</b>	Free trade agreements
<b>NZMB</b>	New Zealand Meat Board
<b>the Act</b>	Meat Board Act 2004
<b>TRQ</b>	Tariff rate quota
<b>UK</b>	The United Kingdom
<b>UK FTA Beef</b>	United Kingdom Beef Free Trade Agreement
<b>UK FTA SG</b>	United Kingdom Sheepmeat Free Trade Agreement
<b>US</b>	The United States
<b>USBV</b>	United States World Trade Organisation Beef and Veal
<b>WTO</b>	World Trade Organisation

## Executive summary

The New Zealand Meat Board (NZMB) is a statutory body with delegated responsibility pursuant to the Meat Board Act 2004 (the Act) to establish and operate meat export quota management systems. NZMB administers several tariff rate quota (TRQ) regimes pursuant to World Trade Organisation (WTO) TRQs with the United States (US), European Union (EU) and United Kingdom (UK). In addition, the New Zealand Government has recently negotiated free trade agreements (FTAs) with the UK and EU. NZMB has delegated authority to administer the UK beef and sheepmeat FTAs following entry into force on 31 May 2023. The EU FTA is moving through the ratification process and NZMB also has delegated authority to administer the EU beef, sheepmeat and goatmeat FTA quotas when the FTA TRQs enter into force.

NZMB's statutory objective set out in section 7 of the Act is to "facilitate the capture, for New Zealand and in the interests of the meat industry, of the best possible ongoing returns available from quota markets." Section 29(2) of the Act requires the NZMB to review each unrevoked allocation mechanism at intervals not greater than five years.

*Castalia was appointed to review the allocation mechanisms under the EU, UK, and US TRQs (WTO and FTA)*

NZMB appointed Castalia to review the current quota allocation mechanisms, as well as to review other available mechanisms and determine whether these are suitable for meeting the NZMB's legal requirements to facilitate the capture of best possible ongoing returns. Castalia has been asked to focus on the economic aspects of quota allocation mechanisms.

We have reviewed the current quota allocation mechanisms used by NZMB pursuant to its role in administering TRQ in the following trade agreements and regimes:

- EU/UK WTO High Quality Beef (EU/UK WTO HQB)
- EU/UK WTO Sheepmeat and Goatmeat (EU/UK WTO SG)
- US WTO Beef and Veal (USBV)
- UK FTA quotas for Beef (UK FTA Beef) and Sheepmeat (UK FTA SG).

### Castalia used four criteria to evaluate six possible allocation mechanisms

We used four criteria agreed with NZMB to evaluate the allocation mechanisms. The four criteria are:

- **Maximising value:** the allocation mechanism must distribute quota in such a way that it rewards producers and exporters that maximise productive, allocative, and dynamic efficiency
- **Fairness:** the allocation mechanism must distribute quota in such a way that it is seen as fair to market participants by ensuring that no firm is seen to be receiving preferential treatment
- **Risk:** the allocation mechanism must consider and manage risks that could result in the loss of economic output
- **Administrative burden:** the allocation mechanism should not impose excessive or unwieldy administrative costs on NZMB and quota system participants.

The NZMB has administered TRQs for the industry for over 20 years and is experienced in balancing three of the latter criteria of fairness, risk and costs in designing and administering quota allocation mechanisms for country specific TRQs.

Prior to carrying out a full review of allocation mechanisms required under the Act, the NZMB wished to engage independent economic expertise to advise on the suitability of various allocation mechanisms for maximising ongoing returns to New Zealand. This was to include assessing current mechanisms used by the NZMB and others employed by other countries or described in the literature that might be suitable and effective in the New Zealand context. As such, emphasis in this report has been on value maximisation as the first consideration for selecting appropriate allocation mechanisms. The three other criteria are then treated as additional factors to be considered.

#### *Mechanisms need to be robust for high and low demand quota years*

NZMB's chosen mechanism needs to be robust to years of low and high quota demand. The robustness is necessary as demand for quota can fluctuate year to year. In years of high demand, quota will be a scarce resource, so the allocation mechanism needs to be able to allocate quota fairly and in a such a way that maximises value to the industry. However, in years when demand is below the quota limit, the allocation mechanism also needs to ensure quota is allocated with minimal administrative overhead.

We evaluated each mechanism for how it would perform when demand for TRQ exceeds supply. We then comment on the robustness of each mechanism in times of low demand separately. Quota allocations have not been fully utilised for around the past 10 years as processors and exporters have accessed other markets. However, demand for quota is not guaranteed to stay at the current low level in future so robustness for high demand remains important.

#### *We evaluated six possible allocation mechanisms*

We evaluated six key TRQ allocation mechanisms and the typical conditions that are also included in the administration of these mechanisms, such as penalty and transfer regimes. The six mechanisms, and reasons for their relevance are:

- Production history: Used for most TRQ allocation mechanisms that NZMB administers
- Export history: Used in Australia
- Combination of production and export history: Used under the recently agreed UK NZ FTA
- First-come, first served (FCFS): A common global approach for allocating quota
- High-fill trigger: Used in Australia for the US Beef quota
- Auctions: Considered an economically efficient mechanism in economic literature.

#### **Evaluation results of TRQ allocation mechanisms used by NZMB and elsewhere**

We evaluated the six key TRQ allocation mechanisms using the four criteria. The combination of production history and export history mechanism is recommended as a value maximising and robust mechanism. Two other mechanisms, high-fill trigger and auctions could also be considered depending on NZMB's views of future quota demand levels. The results of the analysis are set out in Table 0.1 and discussed below.

Table 0.1: Summary of evaluation of mechanisms

Mechanism/criterion	Maximising value	Fairness	Risk	Administrative burden
Auction				
Combination of production history with export history				
Export history				
Production history				
High-fill trigger*				
First-come/first-served				

Key					
	Very poor	Poor	Neutral	Good	Very good

\*High-fill trigger scores will improve if only used when the quota is systematically underfilled

*Interpreting the results table*

The mechanisms are scored on a linear scale from ‘very poor’ to ‘very good’ for each criterion. The results table is ranked based on the maximising value score, as this is the primary focus of the analysis. The other three criteria evaluate the practical considerations of each mechanism. These scores should be used to provide balance to the maximising value score, and allow for readers to separate mechanisms that are scored equally for maximising value. Each mechanism’s score is assigned under the assumption that demand for quota is high. As such, scores may differ in low- or medium-demand scenarios.

*NZMB could consider amending its approach and use a combination of production and export history*

The NZMB’s quota allocation regimes for the EU/UK WTO SG, EU/UK WTO HQB, USBV, UK FTA SG, and UK FTA Beef quotas appear to be broadly meeting the objectives of the Act, and perform well under the evaluation criteria we selected. Both mechanisms are reasonably robust in times of high quota demand but carry additional administrative costs in times of low demand.

**We recommend a combination of production and export history**

For a balanced quota allocation mechanism, NZMB should consider moving all quota to a mechanism based on the combination of production history and export history. This mechanism maximises value and improves fairness over the current production history mechanism. The industry is already familiar with many aspects of this system so transition costs will be low.

The mechanism can maximise the value to New Zealand by promoting allocative efficiency. Allocative efficiency is improved by including exporters alongside producers. Allocative efficiency will tend to lead to specialisation, which can improve the value generated from the



respective quotas. This is achieved by allowing firms that specialise in marketing and promoting meat exports (but are not meat producers) to gain quota as of right in the initial quota allocation round. Under NZMB's current production history mechanism, specialist exporting and marketing firms can only gain quota through the quota transfer system, which is reliant on producers having excess quota to trade.

The mechanism also performs well in both high and low-demand situations. However, in times of high demand, the mechanism will somewhat favour incumbent firms with production and export histories.

Additional conditions improve value maximisation. Historical performance mechanisms can skew towards higher-cost firms with incumbency advantage. However, the risk that value from the quota is not maximised is reduced by several additional conditions: quota trading, penalties for non-fulfilment, and a reserved quota pool for new entrants. These allow for new or innovative firms with limited history to gain access to quota and participate in the market.

**Implementation of a new quota mechanism could be multi-tiered if there is uncertainty about future quota fulfilment levels**

We understand that NZMB preferred a uniform allocation mechanism. However, NZMB could consider a combination of approaches, for example using a tiered approach to implementing quota mechanisms in future. In recent years, quotas administered by NZMB have not been fully filled. We understand this trend is likely to continue. When quotas are not filled, there is low risk of value not being maximised because all applicants obtain sufficient quota at the in-quota tariff. This is because producers and exporters have found other markets with favourable prices. Australia has different tiers of allocation mechanisms that are used across various FTAs and for different product classes. FCFS is used when quotas are not regularly being filled. High-fill trigger is used when quotas are expected to reach or be close to the maximum. Export history mechanism is used when quotas are consistently filled. The Australian Department of Agriculture and Water Resources considers whether to graduate a TRQ to a different tier.

*Auctions are likely to achieve the highest value maximisation for the industry, but only under certain circumstances*

NZMB could consider auctions if quota fulfilment is expected to be regularly high, this mechanism favours efficient companies. The auction mechanism has the potential to be the best mechanism for maximising value. However, it is highly dependent on there being consistently high demand for quota to reward efficient exporters and maximise value. It also imposes high administrative costs, so, to be viable, any efficiency benefits should outweigh procedural costs.

**Some mechanisms are not recommended due to a lack of suitability for NZMB**

We do not recommend the following mechanisms:

- FCFS (on its own)
- Applied tariffs
- License on demand
- State trader or producer groups
- Other (socio-economic scoring measure).

These mechanisms were not evaluated, as we do not consider them suitable for NZMB. We explain the reason for their exclusion in section 3.7.

# 1 Introduction

NZMB administers TRQs, including allocation mechanisms, pursuant to its statutory objective in the Act. Castalia has completed a review of the current mechanisms used by NZMB, as well as other mechanisms used in countries New Zealand typically compares itself to, as well as literature on quota allocation mechanisms.

Section 2 of this report sets out the evaluation framework used in the analysis. The evaluation framework follows the four criteria agreed with NZMB:

- Maximising value
- Fairness
- Risk
- Administrative burden.

Section 3 describes the key TRQ allocation mechanisms reviewed, including the typical conditions that are also included in the administration of these mechanisms:

- Production history: Used for most TRQs that NZMB administers
- Export history: Used in Australia
- Combination of production and export history: Used under the recently agreed UK NZ FTA
- First-come, first served (FCFS): A common global approach for allocating quota
- High-fill trigger: Used in Australia for the US Beef quota
- Auctions: Considered an economically efficient mechanism in economic literature
- We also describe the allocation mechanisms that were ruled out, and the reasons why.

Section 4 evaluates each of the six allocation mechanisms according to the four criteria.

Finally, section 5 sets out our recommendations for some modest changes to NZMB's approach to allocation mechanisms.

## 2 Evaluation framework

We use an evaluation framework of four criteria to evaluate the allocation mechanisms. This framework allows a systematic approach to the assessment, ensuring each quota allocation system assessed is measured against a comparable set of requirements. The four criteria are:

- Maximising value
- Fairness
- Risk
- Administrative burden.

We discuss how the criteria are relevant and how they are assessed in the sections below.

## 2.1 Maximising value

Maximising value is the main consideration for which the NZMB sought independent economic advice from Castalia in this report. The ultimate objective of New Zealand's trade agreements is to maximise the value of exported products and services of New Zealand firms and individuals. The TRQ allocation mechanism needs to provide the best ongoing returns to the industry and the New Zealand economy. This is consistent with the statutory objective of the Meat Board. Section 7(a) of the Meat Board Act 2004 states its objective is "to facilitate the capture, for New Zealand and in the interests of the meat industry, of the best possible ongoing returns available from quota markets."

To maximise value, the allocation mechanism must distribute quota allowance in such a way that it rewards producers and exporters that maximise productive, allocative, and dynamic efficiency.

### *Productive efficiency is promoted when least-cost producers can access quota*

Productive efficiency occurs when a good is produced at the lowest possible cost. By ensuring quota is allocated to productively efficient firms, the allocation mechanism can maximise value by:

- Incentivising lower production costs: Lower production costs can increase the competitiveness of New Zealand's meat exports in international markets, which can in turn lead to an increase in export revenues, maximising value
- Improving quality of meat export goods: Productively efficient firms often use technological advancements and process optimisations to improve product quality. Higher quality goods can fetch higher prices on international markets, again leading to increased revenues and maximised value for the export sector
- Attracting investment: Efficient industries are more likely to attract both domestic and foreign investment. Increased investment can lead to expanded production, job creation, and economic growth, further maximising value in the export sector.

When export quotas are allocated to the most efficient producers, these producers can generate more value both in terms of higher profits for themselves and in terms of contributing more to the national economy. This is because they can produce more competitively priced and potentially higher quality goods and are better positioned to make the most of the limited opportunities offered by the export quotas. Competition between processors, where each is incentivised to improve productive efficiency, ensures farmers obtain the best prices for their stock, and production facilities reward workers with higher wages and optimise capital investment.

### *Allocative efficiency is promoted when consumer preferences are reflected and firms can specialise*

Allocative efficiency refers to resources being used for the production of goods that provide the maximum possible benefit. In the context of quota allocation, this means allocating quotas to the firms producing goods that are in highest demand in international markets. This ensures that the limited quota is used to produce goods that will fetch the highest prices and generate profits from international markets, maximising the value obtained from the quotas. Allocative efficiency can be promoted in the following ways:

- Reflecting consumer preferences: Allocative efficiency can be promoted where the quota mechanism reflects consumer preferences, ensuring that the firms that are best meeting overseas demand preferences obtain quota
- Encouraging specialisation: Allocative efficiency is reached where participants in the supply chain can specialise in the production of goods and services they are most efficient at producing. This can lead to economies of scale (particularly for processors), lower average costs, increased competitiveness, and therefore maximised value for the export sector.

*Dynamic efficiency occurs when firms are productively efficient over time*

Dynamic efficiency involves the optimal balance over time between producing and marketing existing products more efficiently (static efficiency) and innovating new ones. Dynamic efficiency promotes improvements over time in the production and marketing process, driven by innovation and technological advancements. An export quota allocation mechanism will encourage dynamic efficiency when it rewards those firms that remain closest to the efficient frontier over time by investing, innovating and improving productivity. Over time, this leads to higher quality and lower cost goods, making them more competitive in the international market. This increases the value obtained from exports over the long term.

Value can be maximised if dynamic efficiency is promoted over time whereby new entrant producers and exporters or firms that become more efficient can market products for higher prices and can access sufficient quota to maximise value. Innovation allows the industry to continuously evolve and adapt to changing foreign markets to ensure New Zealand's meat industry is profit maximising.

*Key questions to determine if an allocation mechanism maximises value*

The evaluation framework will determine if an allocation mechanism is maximising value by asking the following questions:

- Can more efficient processors or exporters obtain quota allocation in place of less efficient processors? Is the quota systematically allocated to more efficient processors?
- Does the allocation mechanism encourage dynamic efficiency (that is, can quota be allocated to more efficient firms over time)?
- Is there an option and incentive to transfer the quota allocation to a firm that will use it after it is awarded?
- Are quota holders restricted in any way from changing their allocation? (For example, are quota holders restricted to certain trading window periods or only allowed to transfer their quota allocation by a certain amount?)
- Can new or more innovative firms enter the quota allocation? Is the allocation to new quota holders sufficient?

## 2.2 Fairness

Fairness is an important criterion for a TRQ allocation mechanism as it ensures that all participants are operating on a level playing field.

TRQ administration is essentially the rationing of the right to import at the in-quota tariff rate. The limited right to import at the in-quota tariff can create economic rent. Once the quota is

full,<sup>1</sup> there is an economic benefit (arbitrage profits) to those who receive quota allocations and import at the in-tariff rate compared to those who do not receive quota allocations and import at the over-tariff rate. Thus, TRQ administration not only determines who gets the quota, but also who gets the economic (quota) rent.

Therefore, the allocation mechanism must distribute quota allowance in a way that is seen as fair to market participants. A successful mechanism would do this by limiting the opportunity for firms to 'game' the system by penalising those who do, and ensuring no firm is seen to be receiving preferential treatment.

#### *Key questions to determine if an allocation mechanism promotes fairness*

The evaluation framework will determine if an allocation mechanism is fair by asking the following questions:

- Does the mechanism treat all firms equally?
- Could the administrator discriminate against applicant firms for reasons unrelated to quality and/or price of the goods?
- Is there a risk that participants could game the system?
- Are any penalties or incentives sufficient to maintain fairness?

## 2.3 Risk

There are several potential risks that could arise from the selection of a TRQ allocation mechanism. The allocation mechanism must consider and manage risks that could result in the loss of economic output.

Such risks could include:

- Quota non-fulfilment, where an allocation mechanism discourages quota to be fully utilised
- Market disruption, where the allocation mechanism is not managed effectively and disrupts trade
- Corruption, where the allocation mechanism may not be transparent or accountable.

It is important to carefully consider potential risks when assessing a TRQ allocation mechanism. Potential risks may be impossible to avoid completely, so should be considered as trade-offs to the potential benefits of the mechanism.

#### *Key questions to determine if an allocation mechanism mitigates risks*

The evaluation framework will determine how key risks are managed in each allocation mechanism by asking the following questions:

- Will any quota be unused?
- Does the allocation system create any distortions and opportunities for gaming or corruption?

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<sup>1</sup> Importers do not gain an economic advantage over competitors if the quota does not fill, as there is effectively unlimited imports at the in quota tariff rate.

## 2.4 Administrative burden

The allocation mechanism should not impose excessive or unwieldy administrative costs on NZMB and quota system participants and stakeholders through complex requirements or procedures. Administrative costs occur in two ways:

- The administrative cost of operating and maintaining the quota allocation mechanism
- The compliance cost imposed on participants to interact with the system and comply with any directives or other impositions.

*Key questions to determine if an allocation mechanism minimises the administrative burden*

The evaluation framework will determine the levels of administrative burden imposed by each allocation mechanism by asking the following questions:

- How complex (and costly) is the system for administrators to operate?
- How complex (and costly) is the system for participating firms?

## 3 Available quota allocation mechanisms

A variety of quota allocation mechanisms are used around the world to manage TRQs. A TRQ is a two-tiered tariff where, in a given period, a low (or sometimes zero) in-quota tariff applies to a restricted volume of imports and a higher out-of-quota tariff applies to all imports above the restricted volume.

We reviewed the literature for conventional allocation mechanisms used under trade agreements around the world. We selected the allocation mechanisms that are relevant for NZMB to consider. These allocation mechanisms were selected because they are:

- Currently used by NZMB, or
- Used by countries that New Zealand typically compares itself to, or
- Recommended in the literature.

We selected the six allocation mechanisms:

- Production history (section 3.1)
- Export history (section 3.2)
- Production history and export history (section 3.3)
- First-come, first-served (section 3.4)
- High-fill trigger (section 3.5)
- Auction (section 3.6).

For each of the six mechanisms, additional conditions are typically added on. Common additional conditions and ones currently employed by NZMB are set out in Table 3.1. When we describe each mechanism in sections 3.1 to 3.6 below, we also explain where additional conditions have been added in either NZMB's quota allocation regime or in other countries and how it impacts the performance of the mechanisms. We also ruled out some allocation

mechanisms as inappropriate for NZMB and the New Zealand context. These are described in section 3.7.

**Table 3.1: Types of additional conditions linked to TRQ allocation mechanisms**

Condition	Description	Benefits
<b>Quota trading</b>	Quota holders can trade allocated quota (in part or in full) to other eligible exporters or return unused quota to the administrator	<ul style="list-style-type: none"> <li>▪ Allows for quota redistribution which creates another pathway for exporters to gain quota</li> <li>▪ Reduces the risk that allocated quota is under utilised</li> <li>▪ Promotes dynamic efficiency, provided that a less efficient firm is incentivised to transfer unused quota</li> </ul>
<b>New entrant pools</b>	A portion of the total annual quota allowance can be reserved for new entrant firms. Allocation of new entrant quota can be allocated using a separate allocation mechanism to the rest of the quota	<ul style="list-style-type: none"> <li>▪ Creates a pathway for new entrant exporters to gain quota as of right</li> <li>▪ Facilitates competition and innovation in the industry</li> <li>▪ Improves fairness in the market by allowing new companies to participate</li> </ul>
<b>Penalties</b>	<p>The administrator will apply penalties to quota holders that do not use all assigned quota. Penalties often reduce a quota holders' allocation in the subsequent year.</p> <p>Penalties can also be applied to firms that transfer excessive amounts of quota in a quota year.</p>	<ul style="list-style-type: none"> <li>▪ Creates an incentive for quota holders to trade or return unused quota</li> <li>▪ Reduces the risk that allocated quota is under utilised</li> <li>▪ Promotes allocative efficiency, as firms are discouraged from applying for quota they are unlikely to use</li> </ul>
<b>Performance history transfers</b>	Producers and exporters can transfer their relevant performance histories to other companies. This is often used during mergers or buy-outs	<ul style="list-style-type: none"> <li>▪ Creates a pathway for new entrant exporters to gain quota through performance history without the need to build the history over time</li> </ul>

### 3.1 Production history

Under this mechanism, quota is allocated based on quota holders' production history. The production history is measured over a base period which could be a single year, or multiple years. The base period could also be static or frequently updated.

Administrators of a production history mechanism measure a quota holder's production in the base period as a share of all quota holders' production over the same period. This share represents that holder's share of the total annual quota available (or, in the case of available quota being split across multiple allocation mechanisms, a share of the total quota available under this mechanism).

NZMB uses this allocation mechanism for the EU/UK WTO HQB, EU/UK WTO SG and USBV quotas. The mechanism allocates quota based on producers' production history over the past three years. The annual quota allowance is split into two pools:

- The general quota pool, for existing producers, and



- The reserved quota pool, for new producers (new entrants).

For the NZMB's quota production history allocation mechanism, the general quota pool comprises 98 percent of the annual quota allowance, with the reserved quota pool comprising the remaining two percent.

#### *Additional conditions used with the production history mechanism*

The following conditions can be added to the production history mechanism.

##### **Quota trading**

NZMB's production history mechanism allows quota holders to transfer their allocated quota allowance (in full or in part) to other companies that have product that can meet the import requirements of the importing jurisdiction. Transfers must be registered with NZMB and must be completed by a specified cut-off date. Allocated quota can also be returned to NZMB if it is no longer needed.

##### **Penalties for non-fulfilment**

NZMB applies penalties under its production history mechanism. Quota holders are penalised if they hold more than the allowed unused quota at the end of a production year. The penalty is two times the amount of unused quota (less a tolerance amount) which will be deducted from their quota allowance in the following year. The tolerance amount is the higher of either 0.5 percent of the quota holder's quota allowance, or 25 tonnes for the WTO EU/UK SG and USBV (or 300 kilograms for WTO EU/UK HQB).

##### **Reserved amount for new entrants**

NZMB uses a gradual production history allocation system for new entrants in its production history mechanism. Two percent of the annual quota allowance is reserved for new entrants. New entrants can apply for the reserved quota for up to three years. Allocation to new entrants in year one is based on estimated production for that year. Allocation for years two and three is based on estimated production for the current year, and production history earned during the previous new entrant years.

##### **Performance history transfers**

NZMB allows companies with an existing production history to transfer its history to other companies eligible for quota, including new entrants. The transfer provides another avenue for new entrants to become eligible for quota allocation. It is also helpful for mergers and takeovers, as it allows the purchasing entity to absorb the production history of the purchased company, rather than have that history lost.

## **3.2 Export history**

Export history (sometimes referred to as shipping history) considers the amount of eligible product exported or shipped by quota holders. The export history mechanism works similarly to production history. The allocated share of quota reflects a quota holder's eligible exports as a share of total eligible exports by all quota holders.

A key difference between the export history mechanism and the production history mechanism is that under the export history mechanism, a quota holder does not need to be a producer of the good in question to earn the quota allowances in their own right. Therefore, the quota can be earned by a firm that markets or trades in the relevant good but does not produce it.

The relevant export history can be restricted to exports to the quota-specific country, or on a worldwide basis. If the export history is taken on a worldwide basis, then the exported products often need to meet all the requirements of the quota-specific country to be eligible for consideration.

#### *Export history mechanism used by Australia*

Australia's Department of Agriculture, Fisheries and Forestry administers multiple quotas under WTO commitments and free trade agreements. It uses various export history mechanisms for its UK FTA Sheepmeat, UK FTA Beef, EU/UK Sheepmeat and Goatmeat and EU/UK HQB quotas. The mechanisms all use shipping history to allocate quota, but with minor differences:

- The UK FTA Sheepmeat mechanism uses shipping history to the UK and to the rest of the world to allocate quota between exporters. If 95 percent or more of quota is used in any quota year, then the administrator will only allocate 95 percent of the quota in the following year to avoid triggering safeguard provisions within the FTA<sup>2</sup>
- The UK FTA Beef mechanism allocates quota based on the shipping history from the previous year for each exporter, with the amount of product shipped being the amount of quota allocated in the following year. Unallocated quota is held in a reserve pool to be distributed on a FCFS basis to New Entrants and existing quota holders which have used at least 80 percent of their current allocation.
- The WTO EU/UK Sheepmeat and Goatmeat mechanism also uses shipping history to the EU/UK and the rest of the world to allocate quota between exporters. However, it does not include a 95 percent safeguard provision.
- The EU/UK HQB mechanism uses shipping history over the previous three years to allocate quota between exporters.

#### *Additional conditions used with export history mechanism*

Typically, the export history allocation mechanism is combined with additional conditions to improve efficacy:

##### **Quota trading**

Australia allows quota trading in its UK FTA Sheepmeat and EU/UK HQB mechanisms.

For UK FTA Sheepmeat and EU/UK HQB mechanisms, quota holders must fill out a form to notify the administrator of the transfer before a cut-off date. There is no cut-off date for transfers for UK FTA Beef and EU/UK Sheepmeat and Goatmeat. For the EU/UK HQB mechanism, quota holders will be penalised if they transfer excess amount of EU HQB quota. Exporters will not be entitled to receive an allocation if they transfer more than 50 percent of their quota entitlement in any of the past three years.

Australia's mechanisms include a reclamation/reallocation process. Before a specified cut-off date, quota holders can return any excess quota to the administrator. Returned quota is then reallocated on a FCFS basis to quota holders that have requested additional quota. This

<sup>2</sup> "If Australian exports of Sheepmeat to the UK exceed defined thresholds (95 percent of quota or greater in two consecutive years during years 1-10, and 100 percent of threshold for years 11-15) quotas/thresholds for subsequent years will be reduced." <https://ftaportal.dfat.gov.au/GBR/AUS/AUKFTA/product/02041000/tariff>

provides quota holders the opportunity to increase their future allocations, which are otherwise based on the previous year's export volume.

#### **Penalties for non-fulfilment**

Australia applies penalties to quota holders if they break certain rules under their export history mechanisms.

For EU/UK HQB, quota holders will be penalised if they do not utilise 90 percent of their allocated quota after the transfer and reclamation cut-off date. Quota holders will also be penalised if they transfer more than 50 percent of their quota entitlement in any of the past three years (as mentioned above).

For the UK FTA Beef mechanism, quota holders will not be penalised for unused quota, but unused quota will not count towards the following years allocation.

For the EU/UK Sheepmeat and Goatmeat mechanism, quota holders are penalised if they use less than 90 percent of their allocation. The penalty amount for the following quota year will be half the amount of difference between the allocated quota and the total exports.

#### **Reserved amount for new entrants**

Export history mechanisms can use additional conditions to allocate quota to new entrants, since new entrants are unlikely to have an export history. For example, Australia uses different conditions to allocate new entrant quota for each of its export history-based mechanisms:

- For the EU/UK HQB mechanism: a FCFS method allocates quota to new entrants. 500 tonnes (250 tonnes each for the EU and UK) are allocated to new entrants in a separate quota pool. New entrants can apply for up to 80 tonnes for each of EU and UK pools annually on a FCFS basis. Exporters are considered new entrants for three years to allow the buildup of export history, and thereafter join the standard allocation pool. New entrants can also request a claim to any quota that remains unallocated after an annual reallocation process.
- For the UK FTA Beef mechanism: Initial allocations to existing quota holders are equal to the amount of product shipped in the previous year. Any non-allocated quota is available to new entrants on a FCFS basis until the available quota amount is exhausted
- For the EU/UK Sheepmeat and Goatmeat mechanism: This mechanism uses the global shipping history of exporters to create a pathway for new entrants to the EU and UK quota markets. 80 percent of an exporters allocation is determined by the exporters previous year's exports to the EU(UK) as a proportion of total exports to the EU(UK). The remaining 20 percent is determined by the exporters' previous years exports to the rest of the world (of product sourced from an EU accredited supplier) as a proportion of total exports to the rest of the world (of product sourced from an EU accredited supplier).

#### **Performance history transfers**

Australia's EU/UK Sheepmeat and Goatmeat mechanism allows for the transfer of global shipping performance history to other exporters. The transfers can be for a company's entire export history, or for specific quantities from specific years.

### 3.3 Combined production history and export history

Historical allocation mechanisms can also combine production and export history into the same mechanism. Under this mechanism, the quota administrator might create separate pools of quota, one allocated based on production history, and one based on export history.

NZMB's new allocation mechanism for UK FTA quotas for Beef and Sheepmeat is an example of such a mechanism. Under this approach, quota holders can be allocated quota based on their production history and/or export history. The annual quota amount is split into three pools: the Production History pool and the Export History pool, which together form the General Quota Allowance for Qualifying Companies, and the Reserve Quota Allocation pool, for New Entrants. The Production History pool receives 80.75 percent of the total annual quota amount, the Export History pool receives 15.75 percent, and the Reserved Quota Allocation pool receives 3.5 percent.<sup>3</sup>

#### *Additional conditions used with combined production and export history mechanism*

Typically, the combined production history and export history allocation mechanism is combined with additional conditions to improve efficacy.

For the production history and export history mechanism, NZMB applies the same rules for its quota trading, penalties for non-fulfilment, and performance history additional conditions as it does for its production history mechanism. However, the reserved amount for new entrants' condition is applied differently by NZMB. NZMB allocates under a FCFS system for new entrants under the UK FTA quotas where new entrants are allocated a total of up to 3.5 percent of the annual quota until it is exhausted and no individual new entrant can obtain more than a one-third share of the reserved quota pool. A company can remain a new entrant for up to three years, after which it can only apply for the general quota pool.

### 3.4 First-come, first-served

Under the FCFS mechanism, the first applicants are allocated the quota in order of application. Typical systems only allow applications when goods are verified ready for export.

Administrators can apply different approaches to the FCFS mechanism. The approach can differ depending on whether the administrator is in the importing country or the exporting country:

- If the importing country manages the quota, then imports clear customs at the in-quota tariff until the quota limit is reached. All subsequent imports are charged the over-quota tariff
- If the exporting country manages the quota, then exporters apply to the administrator for a tariff rate quota certificate for each shipment, normally when the consignment is verified and ready to be shipped. The administrator allocates the certificates based on the order of receipt of the application until the quota limit is reached. All subsequent exports will not receive a tariff rate quota certificate and will export at the over-quota tariff.

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<sup>3</sup> We understand the quota pool sizes were based on consultation.

The FCFS mechanism is one of the most common global allocation mechanisms, as reported by the World Trade Organisation.<sup>4</sup>

### 3.5 High-fill trigger

The high-fill trigger mechanism is often an addition to FCFS mechanisms that are expected to reach medium to high quota fill level. Export rights are assigned to exports on a FCFS basis until the trigger point is reached, at which point the annual quota allowance reaches a fill level specified by the administrator. Once the trigger point is reached, the administrator will allocate the remaining (unallocated) quota using an alternative allocation mechanism, such as historical allocation or auctions.

Australia uses a FCFS mechanism with a trigger point for its US Beef quota. If 85 percent of the annual quota is filled before 1 October each year, the Department of Agriculture, Fisheries and Forestry allocates the remaining quota proportionally between exporters, based on each exporter's shipping history to the USA, averaged over the previous two years. Exporters must apply for at least one tonne of quota.

### 3.6 Auctions

Quota administrators could, in theory, also auction the right to import at the in-quota tariff. Under an auction, exporters make competitive bids for parcels of quota based on the price they believe the quota is worth. Administrators then allocate quota to the highest bidders. The frequency of auctions can vary. Annual auctions could be used to allocate the full quota allowance, or, alternatively, quarterly or monthly auctions could take place to stagger quota allocation throughout the year.

The administrator may impose various restrictions on the auction. This could include minimum or maximum prices, a requirement to be a member of a designated trade association, or a limit to the amount of quota any one exporter can bid for (to ensure competition in the market).

Despite being considered as a very economically efficient type of allocation mechanism,<sup>5</sup> auctions for TRQ are not commonly used in practice. We consider the auction mechanism to likely be impractical to administer from the exporting countries side.

### 3.7 Mechanisms ruled out in this analysis

There are several other mechanisms used globally that we do not consider relevant to NZMB for this evaluation. These are:

- Applied tariffs
- License on demand

<sup>4</sup> WTO 2021, *G/AG/W/183/Rev.2*, available at: <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/AG/W183R2-01.pdf&Open=True>

<sup>5</sup> D. Skully, 2001, *Economics of Tariff-Rate Quota Administration*, U.S. Department of Agriculture, available at: [https://www.ers.usda.gov/webdocs/publications/47379/31998\\_t1893\\_002.pdf?v=0](https://www.ers.usda.gov/webdocs/publications/47379/31998_t1893_002.pdf?v=0)

R. Joerin 2014, *Improving Market Access: The Role of Auctions in Converting Tariff-Rate Quotas into Single Tariffs*, the Review of Agricultural and Applied Economics, available at: <https://ageconsearch.umn.edu/record/170467/>

- State trader or producer groups
- Other (socio-economic scoring measure).

We set out the reasons for excluding these mechanisms below.

#### *Applied tariffs*

Applied tariffs are used when an importing country does not enforce the quota limits and allows unlimited imports at or below the in-quota tariff rate. This is not relevant for NZMB as the quota limits for all of the quotas concerned are enforced.

#### *License on demand*

License<sup>6</sup> on demand is a mechanism where the quota administrator issues licenses to exporters for the right to export at the in-quota tariff. Licenses may be allocated with a FCFS system, or by using some variant of proportional allocation based on past performance. We do not consider license on demand to be a relevant standalone mechanism due to its reliance on other mechanisms to allocate the licenses which are already included in the mechanisms we review.

#### *State trader or producer groups*

This mechanism gives the right to import and export at in-quota tariffs, which is granted wholly or primarily to a state trading organisation or an organisation representing domestic producers of the related product. The state trader or producer group either purchases and exports all product itself, or reallocates the quota to suppliers. This mechanism is not appropriate for NZMB which is a statutory body with delegated authority under the Act.

#### *Other (socio-economic scoring measures)*

Other measures can be used to allocate quota. In South Africa, the Department of Agriculture, Forestry and Fisheries uses a socio-economic scoring measure called the Broad Based Black Economic Empowerment (BBBEE) score to supplement its allocation mechanism for EU Canned Fruit. The process has been criticised for allowing inefficiencies in the quota allocation. Therefore, we do not consider this type of measure to be relevant to NZMB.

## 4 Applying the evaluation framework to the allocation mechanism options

We evaluated six allocation mechanisms in detail. The results are set out in Table 4.1 below. The production and export history mechanisms perform relatively well, provided that specific conditions are used. We identified opportunities for NZMB to consider a combination of production and export history.

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<sup>6</sup> This is not to be confused with the historical New Zealand meat export statutory term “meat export licence” which is reworded as 'meat export registration' under the 2004 Act.

Table 4.1: Summary of evaluation of mechanisms

Mechanism/criterion	Maximising value	Fairness	Risk	Administrative burden
Production history				
Export history				
Combination of production history with export history				
First-come/first-served				
High-fill trigger*				
Auction				

Key					
	Very poor	Poor	Neutral	Good	Very good

\*High-fill trigger scores will improve if only used when the quota is systematically underfilled

## 4.1 Evaluating production history

The production history allocation mechanism is used for all but one of NZMB’s quota allocations. It can be poor at maximising value, unless key conditions are incorporated into the design. NZMB incorporates several positive elements into production history, including allowing transfer of quota, reserve allocation for new entrants, and penalising unused quota. It is mostly fair, and NZMB’s model has mechanisms to mitigate risks. The administrative burden is moderate. Additional detailed analysis and graphs are presented in Appendix B.

### 4.1.1 Maximising value

The production history mechanism must be combined with conditions to ensure it can improve the value achieved. Under the production history mechanism, quota allocations are not directly related to a firm’s productive efficiency. Over the long-term, more productively efficient firms will tend to last longer than less efficient ones, but the quota allocation mechanism does not immediately respond to changes in firms’ efficiency.

This mechanism can tend to reward higher-cost processors with quota allocation because of a long production history. It will not necessarily reward efficiency improvements. This means that the mechanism does not encourage dynamic efficiency if there is no adjustment mechanism that recognises firm improvements over time.

New or innovative firms with limited production history can face barriers to entry under this mechanism. This may enable incumbent firms to become less efficient over time without losing any market access. This would reduce the value generated for the New Zealand meat industry.

### *NZMB's use of production history method includes sensible conditions*

Under the NZMB's approach to the production history allocation mechanism, several conditions are added. Transfers of quota and transfers of production history are permitted. Penalties for non-fulfilment of quota are imposed. New market entrants are reserved a small allocation in each year.

We reviewed the key conditions used by NZMB under the TRQs it administered and reached the following conclusions:

- **Quota transfers:** Transfers of quota promote dynamic efficiency, provided that a less efficient firm is incentivised to transfer unused quota. Quota transfers under the EU/UK WTO SG quota for example have consistently occurred within the export season.<sup>7</sup> Transfers or hand-backs of quota do not impact the allocation in future years. If a producer is awarded quota based on production history, and systematically transfers this to other parties (or hands some back), it does not affect future years' quota allocations.
- **New entrant quota:** NZMB's production history mechanism includes a pathway for new entrants to gain access to quota. However, the pathway has not been used to allocate quota since 2009. The non-use of the reserve pool may be related to the drop-in quota fulfilment rate, with new entrants (including specialist export and marketing firms) easily able to gain quota through the transfer system. The trend could also reflect that the processing industry is consolidating into fewer processors as the sector has excess capacity.

#### **4.1.2 Fairness**

The production history mechanism tends to treat all producing firms fairly based on historical production. NZMB uses objective production history, with no discretionary factors. We have seen no evidence to suggest there is structural unfairness.

However, since only production history is used to determine allocations, the mechanism favours producers, and ignores firms that only export meat. Without appropriate conditions, this allocation mechanism tends to favour producers over exporters.

There is a risk that the system could be gamed by artificially increasing production (and not necessarily export) regardless of demand. Since quota is allocated on production history, transfers of quota (for export by other parties) do not affect future allocations. This could allow large producers to gain a disproportionate share of the quota relative to their own exports and retain rights to quota even though they are not exporting to those markets.

This would be more of a problem if the quota allocation limit was regularly reached. Over the past decade, most New Zealand WTO red meat quotas have not been filled, so this limit has not applied. Exports have moved to other non-quota markets where competitive prices are achieved. If this dynamic changed, and European, UK and US market quota limits were reached again, then this potential for gaming would reemerge.

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<sup>7</sup> See Appendix B for analysis and charts.



### *NZMB's use of additional conditions makes the production history mechanism fairer*

NZMB uses several additional conditions to make its production history mechanism fairer. The reserve quota pool for new entrants preserves some fairness by providing a pathway for new producers to gain access to quota. The use of a quota transfer system provides an additional pathway for new producers or non-producing exporters to access quota.

We reviewed the key conditions used by NZMB and reached the following conclusions:

- **Market structure:** NZMB data on the EU/UK WTO SG quota allocation market structure suggests that the production history mechanism is fair. The market has a diversity of suppliers, with no one large company dominating the market, and market share fluctuates year to year. NZMB data also suggests that the EU/UK WTO HQB and USBV quota allocation markets are fair, for similar reasons as above.
- **Quota transfer system:** NZMB's quota transfer system makes the production history mechanism fairer by providing an alternative way for companies (including new entrants and non-producing exporters) to access quota. The access for exporters, in particular, should reduce some of the advantage that producers have under a production history-based mechanism.

#### 4.1.3 Risk

Historical production mechanisms carry a risk of quota non-fulfilment, due to quota being allocated based on past production. The risk of non-quota fulfilment comes if a current producer, holding quota, no longer needs as much quota as it has in the past. For example, if a producer decides to reduce production or stops producing from one year to the next. However, because the annual quota allowance is allocated based on past production, it may take some time for the producer's share of the allocation to decrease to its new level of demand. This delay can result in quota continuing to be allocated to a company that has no intent to use it, at the expense of other quota users who have a need for quota.

This risk can be reduced in two ways: allow for (and incentivise) quota transfers and hand backs, and frequently update the allocation shares.

By allowing for quota transfers and hand backs, a company with excess quota can release its excess quota to other companies which have a need for it. However, a transfer or hand back system on its own only reduces the risk if the quota holder decides to release its excess quota. Therefore, including incentives to release excess quota, such as penalising companies holding unused quota, can reduce the risk of quota non-fulfilment even more.

However, allowing for transfers and hand backs only reduces the risk of quota non-fulfilment for the current quota period, and not for future quota periods. This is because quota transfers and hand backs allow other companies to increase their exports, but do not affect production, and therefore quota allowances in any way.<sup>8</sup>

Frequent updating of allocation shares can also reduce the risk of quota non-fulfilment for a historical production-based allocation mechanism. Frequent updating of allocation shares will more effectively capture changes to a company's production behaviour.

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<sup>8</sup> Penalties on excessive transfers can remedy this by creating a 'use it or lose it' situation for quota holders. This type of penalty is applied to Australia's EU/UK HQB TRQ, described in section 3.2.

There is also a risk that the production allocation mechanism could be gamed to capture excess quota rent. Producers could increase production, or receive additional production history through transfers, to gain more quota for future years, even if the producer does not plan to export all the product itself. It could then sell that quota and retain the quota rent to other parties if the demand is high. This would only apply in years when the quota is fully taken up and there is high demand.

*NZMB's production history mechanism structure, combined with low fulfilment rate, reduces the risk of quota non-fulfilment and excess quota-rent gaming*

The risk of non-quota fulfilment is currently low for NZMB, primarily because its quota is under-utilised.<sup>9</sup> The mechanisms structure (allocating quota based on 3 years of production history) and the quota transfer system also reduce the risk quota-non fulfilment.

We reviewed the key conditions used by NZMB and reached the following conclusions:

- **Low quota utilisation:** All three quotas under the NZMB production history allocation mechanism have excess quota that quota holders' hand back to NZMB. When excess quota is returned to NZMB, it can be reallocated to other exporters, thus reducing the risk of quota non-fulfilment.
- **Mechanism structure:** The structure of NZMB's production history allocation mechanism also helps to reduce the risk of quota non-fulfilment. NZMB uses the three most recent years of production history to determine the next year's allocation. This method ensures that medium- to long-term changes to producers' outputs are recognised and will affect the allocation share. NZMB's three-year rolling average is in line with other historical allocation mechanisms reviewed, such as Australia's EU/UK WTO HQB mechanism and South Africa's EU Canned Fruit mechanism.
- **Quota transfer system:** NZMB's quota transfer system also reduces the risk of quota non-fulfilment, as it provides the opportunity for excess quota to be re-distributed to other exporters.

#### 4.1.4 Administrative burden

Administrative burden appears moderate. Costs include monitoring production history, which should be easily monitored and audited. Straightforward arithmetical approach can be used to determine future season allocations.

Compliance costs are moderate for participating firms. Annual production reporting and applications to the administrator are straightforward. The trading system is relatively simple, with bilateral arrangements made between two firms, and a one-page form completed and submitted to NZMB.

## 4.2 Evaluating export history

The export history allocation mechanism has some advantages to the production history mechanism in that it can better align the initial quota allocation with the firms that will

<sup>9</sup> Quota non-fulfilment is when quota is not used despite high demand for quota.

ultimately export meat into the destination market. The export history mechanism is used by the Australian Department of Agriculture, Fisheries and Forestry.

#### 4.2.1 Maximising value

Under the export history mechanism, quota is allocated based on historical export volumes. This is not directly related to a firm's productive efficiency but would tend towards rewarding more efficient firms. The mechanism would not immediately award with a higher allocation if firms are earning higher returns from exports but should do so over time.

This mechanism could tend to give higher-cost processors short-term quota allocation because of their export history. Therefore, the length of export history required to receive quota should not be too long.

New or innovative firms with limited export history would face barriers to entry under this mechanism without mitigating conditions. Without threat of entry, incumbent firms face fewer incentives to become efficient. Without mitigating conditions, allocating based on export history alone would not maximise value.

Like production history, higher-cost firms with a history of export may continue to secure more quota, making it difficult for more productive firms to secure market access in times of high demand for quota. This may not encourage dynamic efficiency if it does not adjust for efficiency over time. However, the mechanism is more neutral than the production history mechanism since firms with export history can include both producers/processors and specialist marketing export firms. This makes it easier for specialist marketing firms to obtain quota as of right, rather than by trade with processors. New firms with limited export history may face entry barriers if quota is held by incumbents.

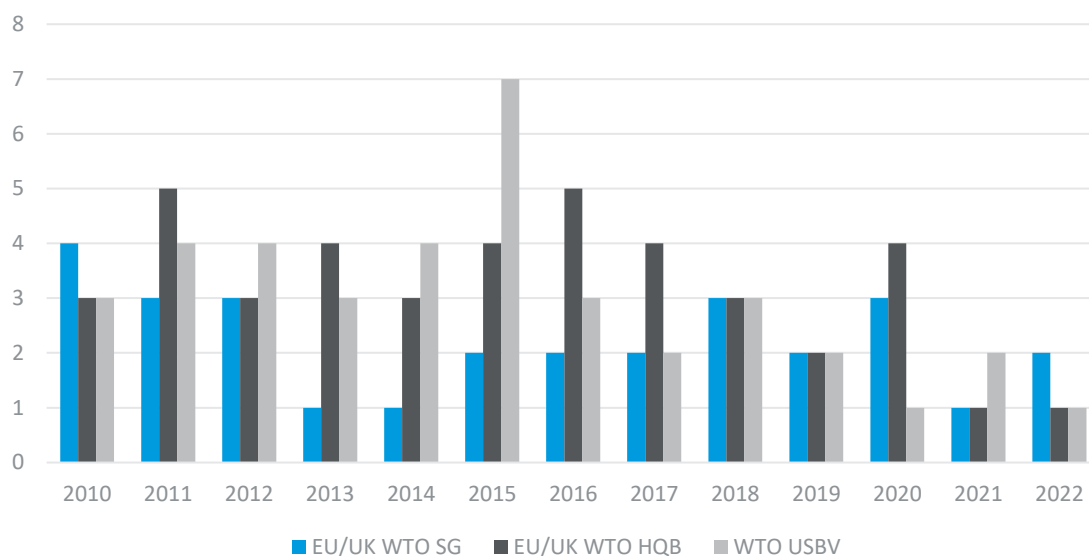
##### *Conditions can ensure quota is allocated to more efficient firms under export history mechanism*

The Australian export history quota mechanism enables quota trading and has a reserved amount for new entrants (which differs by relevant trade agreement).

The Australian system also imposes penalties if firms transfer over 50 percent of the initial allocation. This incentivises exporters to only apply for the quota they expect to use, improving allocative efficiency. It also discourages firms from creating new subsidiaries to gain access to new entrant quota, only to transfer the allowance back to the primary exporter.

A penalty for excessive transfers is not currently used in any of NZMB's allocation mechanisms. A review of NZMB data reveals that transfers of at least 50 percent of initial allocated quota occur regularly across all NZMB's red meat quotas, as shown in Figure 4.1. This could suggest that a penalty for excessive transfers might be suitable for NZMB. However, one reason for large transfers is that NZMB allows consortia to hold quota, which must be transferred to a nominated marketing entity for exporting.<sup>10</sup> If implementing a transfer penalty regime, NZMB would need to consider how it would apply to consortia.

<sup>10</sup> At least one consortium was responsible for large transfers in all year's bar 2021 for the EU/UK WTO SG quota. At least one consortium was also responsible for large transfers until 2016 for the EU/UK WTO HQB and WTO USBV quotas.

**Figure 4.1: Number of companies transferring more than 50 percent of their initial allocated quota**

Source: NZMB exporter data 2010-2022

#### 4.2.2 Fairness

The export history mechanism may generally be seen as fair for participants. Quota is only allocated to firms that have a history of using it (that is, by exporting). Specialist exporting or marketing firms can receive quota as a right, rather than have to rely on transfers or reallocation processes.

However, without appropriate reserved quota for new entrants or new exporters it could be unfair. Other conditions could promote entry and diversity of participants, such as transfers and reallocations, and penalties for non-use.

The export history mechanism is probably less prone to discrimination if based on objective export data. However, firms could still potentially game the system by exporting low-value goods to boost export history. Penalties and incentives should genuinely disincentivise this behaviour.

#### 4.2.3 Risk

Export history mechanisms carry a similar a risk of quota non-fulfilment to production history mechanisms. This is because quota can be allocated based on past export in cases where export volumes might fall in subsequent years. This risk can be reduced in two ways: allow for (and incentivise) quota transfers and hand backs, and frequently update the allocation shares.

The export history mechanism is better than the production history mechanism in ensuring the initial allocation reflects the ultimate quota user. This is because the ultimate quota use reflects the actual export of meat, not the production. Gaming is less likely than under the production history allocation mechanism since it is harder to inflate exports to obtain higher quota for future years than it is to increase production (and trade quota to exporters).

#### 4.2.4 Administrative burden

The administrative burden on the quota administrator is low-to-moderate. The administrator needs to verify export data, facilitate the transfer of quota (if this is an option) and apply a penalty regime when required.

Firms that participate in the export history quota allocation regime face low compliance costs when compared to a production history regime. This is because the historical export data should be provided directly to the administrator by customs agencies.

### 4.3 Evaluating combination of production history with export history

The combination of production history and export history mechanism can be economically efficient when paired with appropriate additional conditions. Allocating quota based on both production and export history can make it fairer than other performance history mechanisms and encourage specialisation in the industry. The administrative burden is moderate, but slightly higher than for production history.

#### 4.3.1 Maximising value

Like production history and export history, quota allocation could be skewed towards high-cost processors with substantial production and export history, making it difficult for more productive firms to access quota. This may not encourage dynamic efficiency if it does not adjust for efficiency over time. However, by including export history in the allocation process, this mechanism provides an opportunity for specialist marketing or exporting firms to access quota, as of right, through initial allocations. This may encourage efficiency in the market by allowing for specialist firms to participate.

The extent that specialist marketing or exporting firms can gain quota through initial allocations depends on how the mechanism balances production history versus export history. A mechanism that heavily favours production history may still limit access to specialist exporting firms, as producer-exporters will also be eligible to receive quota from the export history-based allocation share.

New or innovate firms with limited production or export history may continue to face barriers to entry, unless the mechanism includes additional conditions to allow for new entry. In particular, rewarding firms for past production performance may enable incumbent firms to become less efficient over time without losing market access. This would reduce the value generated by exports for the New Zealand meat industry.

#### *NZMB's mechanism improves efficiency by allowing transfers and reserving quota for new entrants*

NZMB currently operates two quotas under its production history and export history allocation mechanism—the UK FTA Beef and UK FTA SG quotas. Both quotas have only been in operation since 31 May 2023, so no data is available.

Like the production history allocation mechanism, NZMB's combined production history and export history allocation mechanism allows for quota transfers, which can improve the dynamic efficiency of the quota.

However, unlike the production history allocation mechanism, transfers under NZMB's production history and export history allocation mechanism can affect future allocation shares

due to the export history factor. If a small company, or specialist exporter continually receives (and uses) additional quota through transfers, then their export history will increase over time, resulting in larger initial allocation shares in future years. This further facilitates dynamic efficiency in the production and export history mechanism.

### 4.3.2 Fairness

The combined production history and export history mechanism has the potential to treat all firms fairly based on historical performance. However, the mechanism may favour either producers or exporters depending on how the combined performance history is calculated. An adjustment mechanism would be needed to ensure an equal weighting, and no double-counting. This might reflect the current New Zealand industry, if there are more producer-exporters and fewer specialist exporter or marketing firms. However, if the balance changes, then the mechanism should recognise the changing patterns on a rolling basis.

There is no research on combined production and export history mechanisms. The initial balance should reflect the recent history (where producers have traded quota to exporters), and should be amended on a rolling basis to reflect changes in the market. If transfers during the quota year tend to flow from producers to specialist exporters, then the rolling adjustment will reflect that in future years, by increasing the amount of quota allocated by export history.

Conditions are needed to ensure the mechanism is fair to new, small, or domestically focused firms which are less likely to have production or export histories. Quota transfers and reserved quota for new entrants promote fairness.

Like other production history-based mechanisms, there is a risk that the system may be gamed by firms artificially inflating both production and exports. However, the risk is reduced by including export history to allocate quota, as it is based on actual use of quota for exports. Penalties and incentives can also be used to maintain fairness and reduce risk of gaming.

#### *NZMB's calculation of performance history includes conditions to support fairness*

Under NZMB's approach to the combined production history and export history mechanism, several additional conditions are used to make the mechanism fairer. The reserved quota pool for new entrants and the quota transfer system provides pathways for new, small, or domestically focused firms to gain access to quota.

### 4.3.3 Risk

The combined production and export history mechanism carries a similar risk of quota non-fulfilment to the production history mechanism and the export history mechanism. This is because quota allocation can be based on past performance histories that might fall in subsequent years. Quota transfers and hand backs (with appropriate incentives) allow the redistribution of quota and reduces the risk of quota non-fulfilment.

The combined export and production history mechanism is better than the production history mechanism in ensuring the initial quota allocation reaches the ultimate quota user (an exporter), because of the export history component. However, by including the production history component, the combined export and production history mechanism is not as effective as the export history mechanism at ensuring exporters receive sufficient quota in the initial allocation round.

The opportunity to game the system for excess quota rent might exist under the combined production and export history mechanism. However, the risk is lower compared to the

production history mechanism because of the export history component. It is harder to inflate exports in order to obtain higher quota for future years than it is to increase production (and trade quota to exporters). The level of risk will likely be affected by the balance of production history to export history in the allocation calculation. A mechanism that favours production history will likely have a higher risk of gaming.

*Quota non-fulfilment risk is low due to the quota transfer and hand back system*

The risk of quota non-fulfilment is decreased as NZMB's mechanism allows for quota transfers and hand backs.

#### **4.3.4 Administrative burden**

Administrative costs are moderate, but slightly higher than for production history. Administrators must verify both production and export data. Compliance costs are similar to the production history mechanism because export data is provided by Customs, which puts no additional compliance cost on exporters.

## **4.4 Evaluating first-come, first-served**

The FCFS allocation mechanism would not maximise value. It can also tend to be unfair, and risks becoming captured over time, more so if the administrator is in the exporter country like NZMB would be. There is some risk that quota would remain unallocated and not reach the highest value exporter. Finally, administrative costs would be low but compliance costs moderate.

### **4.4.1 Maximising value**

A FCFS mechanism may result in quota allocation to firms that are not necessarily the most efficient or innovative, which could lead to productive, allocative, and dynamic inefficiencies. It does not distinguish between high-cost and low-cost processors; allocation is based purely on timing.

Our conclusions are based on:

- FCFS could lead to productive inefficiency because it does not take into account the relative efficiency of different producers. Under this mechanism, quota is allocated to firms that apply first, not those that can produce the good most cost-effectively. Allocation under FCFS may produce a mismatch between the firms that would gain the most (or provide the most value to consumers) from the quota and the firms that actually receive it. This leads to allocative inefficiency
- A FCFS mechanism may be dynamically inefficient as it provides no incentives for firms to improve their productivity or innovate over time. Over time, this could stifle technological advancement and the dynamic efficiency of the sector.

### **4.4.2 Fairness**

Under FCFS, all firms are treated equally in theory as the right to export is given to all provided there is quota available. However, in times of high demand, larger exporters may have an advantage over smaller or newer exporters if they can get product ready for shipment faster. This is likely if the industry has a shortage of processing and shipping facilities, as exporters with larger volumes are likely to be priority customers.

Discrimination is less likely due to the timing-based nature of the process. System gaming could occur, but more likely at the processing and shipping stage, rather than the quota application stage.

#### **4.4.3 Risk**

Since speed of application is rewarded, there is risk that the quota remains unallocated to the firm that values it most. If the demand for quota is high, there may not be any unallocated or unused quota.

#### **4.4.4 Administrative burden**

The administrative burden is likely to be low. Administrators only need to track applications for quota as they come in and issue export certificates. Under FCFS, there is no annual application, application fees, transfer system, penalty system, or a need to track historical performance.

The compliance burden on firms is also likely to be low as firms do not need to manage quota allocations (that is, do not need to apply, transfer, or potentially return quota). However, firms do need to monitor availability of quota and estimate the coming season or year's volumes requiring quota.

### **4.5 Evaluating high-fill trigger**

The high-fill trigger mechanism is not well suited to maximising value, unless the relevant TRQ is unlikely to be filled. It could be appropriate for NZMB, because most quotas administered by NZMB have been underfilled in recent years. In other respects, it is similar to the FCFS mechanism.

#### **4.5.1 Maximising value**

A high-fill trigger mechanism acts like a FCFS mechanism up until the trigger point (when a specified quota fill level is reached). After that point, the mechanism typically uses production history or export history to allocate the remaining quota.

As a result, the high-fill trigger mechanism will maximise value to a similar extent as the FCFS mechanism. That is, productive efficiency, dynamic efficiency, and allocative efficiency may all be a concern.

However, the high-fill trigger mechanism contains a portion of allocated quota, that will improve the overall efficiency of the mechanism. A high-trigger fill mechanism, with a historical export (or production) allocation mechanism, will mimic the efficiency characteristics of a historical export mechanism (as discussed in section 4.2) or historical production mechanism (section 4.1), albeit, to a lesser effect.

The trade-off is that under a high-fill trigger mechanism, the market generally operates as a free market without the need for transfers, reallocation, or incentives. In an under-utilised market, allocative inefficiency and productive inefficiency is less of a concern, as no allocation takes place and all processors/exporters are able to access the market, regardless of being a high- or low-cost processor. In any year when utilisation rates are high, the allocated quota pool provides some assurance to efficient producers and exporters that their efficiency will be rewarded.



#### 4.5.2 Fairness

Under the high-fill trigger mechanism, all firms are treated fairly until the trigger point is reached. However, this changes if the quota fill reaches the trigger point, and the alternative allocation mechanism is activated. The fairness of the system will then depend on the alternative allocation mechanism chosen.

Including transfer provisions, a reserved quota pool for new entrants, and penalties and incentives within the allocated quota could also improve fairness of a mechanism where the trigger point is expected to be activated.

#### 4.5.3 Risk

The risk of quota non-fulfilment is low in a high-fill trigger mechanism. Under a high-fill trigger mechanism, the majority of quota is only assigned to an exporter when a valid consignment is ready to be shipped. Thus, firms are not allocated quota to hold until used throughout the quota year.

The risk of quota non-fulfilment only occurs if and when the trigger point is reached, and the allocated quota is allocated using an alternative mechanism. At this point, there is the potential risk that firms receive and hold quota without the intent or need to use it. The risk can be minimised through allowing quota transfers and penalising unused quota. The risk of gaming to capture excess quota rent is very low in a high-fill trigger mechanism, as the majority of quota is only assigned when it is ready to be used.

#### 4.5.4 Administrative burden

The administrative burden is likely to be low, unless the trigger point is reached. At the trigger point, the administrative and compliance burden on the administrator and the applicants respectively increases to a moderate level, consistent with a production history or export history mechanism.

### 4.6 Evaluating Auctions

Auctions are a potential option for NZMB. In theory, auctions are good at maximising value and distributing quota in a fair manner. However, in practice, the auction mechanism can carry high risks and typically has higher administrative costs.

#### 4.6.1 Maximising value

Auctions have the potential to be effective at maximising value. Economic literature highlights the economic efficiency of auction mechanisms.<sup>11</sup> They are economically efficient as the most productive firms will tend to bid the highest price for the quota. Auctions can also reduce rent-

<sup>11</sup> D. Skully, 2001, *Economics of Tariff-Rate Quota Administration*, U.S. Department of Agriculture, available at: [https://www.ers.usda.gov/webdocs/publications/47379/31998\\_t1893\\_002.pdf?v=0](https://www.ers.usda.gov/webdocs/publications/47379/31998_t1893_002.pdf?v=0)

R. Joerin 2014, *Improving Market Access: The Role of Auctions in Converting Tariff-Rate Quotas into Single Tariffs*, the Review of Agricultural and Applied Economics, available at: <https://ageconsearch.umn.edu/record/170467/>

seeking.<sup>12</sup> Under an auction, the most efficient firms earn the right to export goods (due to their ability to bid higher prices), while the inefficient firms will underbid and fail to secure quota, thus incentivising productivity improvements or market exit.

Dynamic efficiency is also encouraged through auctions (assuming the industry is competitive). Firms throughout the production chain are incentivised by efficient exporters to invest in new technologies or innovate with new practices that improve their efficiency. This leads to value maximisation throughout the industry.

Auctions can also maximise value to the industry through the distribution of the auction revenue. The Administrator collects a revenue from the proceeds of the auction. After recovering the costs of the mechanism, the revenue can either be retained by the administrator or redistributed back into the industry. The administrator could use the revenues to help improve the long-term value of the industry if it were to put the revenues towards research funds, scholarships, or other educational uses that benefit the entire industry.

#### 4.6.2 Fairness

Auctions are considered a fair mechanism for allocating quota. Economic literature suggests that an auction is the least discriminatory quota allocation mechanism as it neutralises the quota rent.<sup>13</sup> The quota rent is neutralised because the quota administrator collects the quota rent, rather than the winning exporters.

In theory, all firms have equal opportunity to participate in the auction. Firms do not gain a specific advantage by being an incumbent compared to a new entrant. However, in practice, large incumbents are likely to have an advantage over smaller new entrants due to their ability to take advantage of economies of scale. If demand for quota is high, then smaller, less efficient firms may be crowded out of the market. This might maximise value for the industry, but also reduce fairness for smaller firms.

Fairness for small firms and new entrants could be improved by holding side-auctions for smaller pools of quota with restrictions on which exporters can participate. However, this would come at the expense of value maximisation for the industry.

#### 4.6.3 Risk

Auctions carry risks for auction participants. The main risk for auctions is price uncertainty because bids would need to be submitted prior to the season and commodity prices fluctuate. Futures markets might reduce this risk for quota applicants, but it is unknown whether the costs of operating and participating in a futures market would be justified for New Zealand meat quotas.

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<sup>12</sup> R. Jorin & Y. Lengwiler, 2004, *Learning from Financial Markets: Auctioning Tariff-Rate Quotas in Agricultural Trade*, Swiss Journal of Economics and Statistics, December 2004. Available at: [https://www.researchgate.net/publication/24051476\\_Learning\\_from\\_Financial\\_Markets\\_Auctioning\\_Tariff-Rate\\_Quotas\\_in\\_Agricultural\\_Trade](https://www.researchgate.net/publication/24051476_Learning_from_Financial_Markets_Auctioning_Tariff-Rate_Quotas_in_Agricultural_Trade)

<sup>13</sup> D. Skully 2001

The auction revenues would also change from year to year. High demand periods would see the administrator collect relatively high revenues, as exporters compete for scarce quota. Low demand periods would see administrators collecting no revenues.

However, the risk of quota non-fulfilment would be low for auctions, as participants face costs to obtain the quota so would not bid above their likely fulfilment. Administrators could reduce any residual non-fulfilment risk by allowing for quota transfers and by imposing penalties on firms holding unused quota at the end of the quota year. Such penalties might not be necessary if the price for quota is sufficiently high (driven by quota demand) to deter firms from holding excess quota. However, in times of low-medium quota demand, the auction price for quota may not be a sufficient deterrent on its own.

#### 4.6.4 Administrative burden

The administrative burden is likely to be high for an auction mechanism. Administrators would likely need to procure specialist skills to run the auction. While this could be outsourced to a third party, it would be costly.

The administrator will also have to distribute the auction revenues, which will have costs. NZMB would also need to ensure it complied with the Act when distributing any net revenues. Auction revenues are paid by the industry so would need to be returned to the industry in a way that complies with NZMB's statutory duties, and in a way that has the broad support of industry and other stakeholders. The revenues from each auction are likely to fluctuate each season depending on in-market meat prices and auction demand. The fluctuations may create additional administrative costs if distributions are lumpy from year to year and need to be evenly distributed over a number of years.

Participating firms will face moderate to high compliance costs. These firms will need to establish a good understanding of world and import market prices (or pay specialists to provide this information), as well as having a good understanding of their own costs. TRQ auctions are rarely used internationally. This may be due to the administrative costs.

## 5 Recommendations

The NZMB's quota allocation regimes for the EU/UK WTO SG, EU/UK WTO HQB, USBV, UK FTA SG, and UK FTA Beef quotas appear to be broadly meeting the objectives of the Act, and perform well under the evaluation criteria selected.

If NZMB prefers to apply a single mechanism to all TRQs, then we recommend applying the combination production and export history mechanism. This mechanism performed well against all criteria we evaluated, and would be robust if the quotas under FTAs return to being filled (since around 2010, most quotas have been underfilled with exporters preferring other markets). The mechanism would improve fairness in the market and may improve value maximisation when compared to the currently used production history mechanism.

However, if NZMB considers that there is a high likelihood that quota allocations under the various trade agreements will systematically be underfilled in future, then it could consider a high-fill trigger system. The high-fill trigger system removes the need for transfers, reallocations and penalties during periods when the quota is underfilled. Such a system would be no less efficient than any other model if quota remains unfilled. It is fair, since any firm can

apply for the export rights, regardless of history, speciality, or size. It would have low or moderate administration cost.

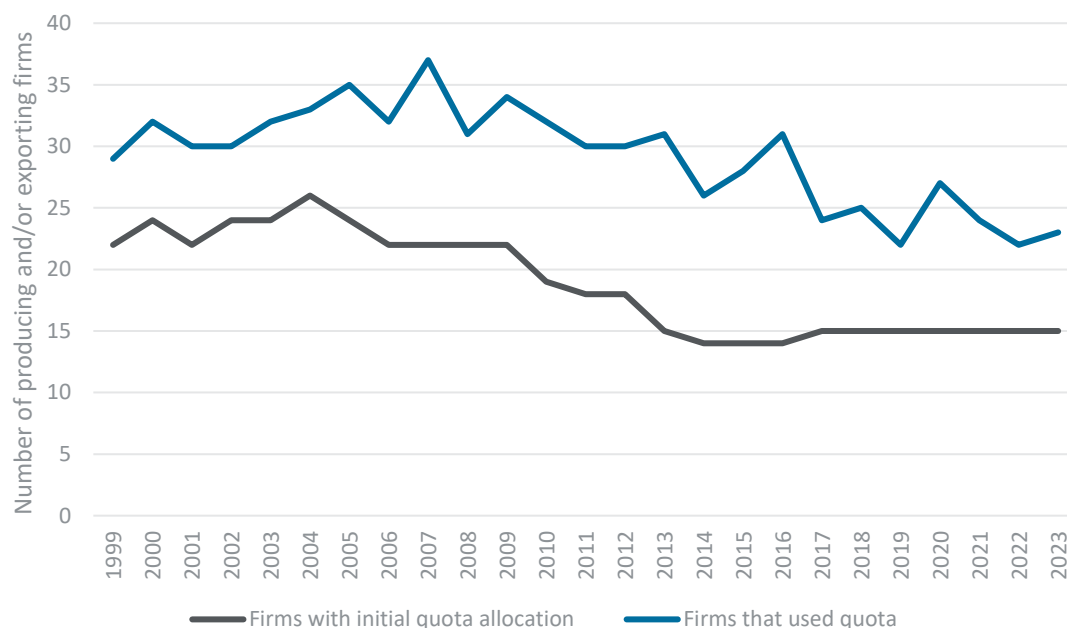
Alternatively, NZMB could consider auctions if quota fulfilment is expected to be regularly high, this mechanism favours efficient companies. The auction mechanism has the potential to be the best mechanism for maximising value. However, it is highly dependent on there being consistently high demand for quota to reward efficient exporters and maximise value. It also imposes high administrative costs, so, to be viable, any efficiency benefits should outweigh procedural costs.

*Change to combination of production and export history may improve value maximisation*

Some adjustments could be considered to NZMB's current approach to production history allocation. The data show that in most cases, a significant proportion of the initial allocation is subsequently transferred from producers to other firms, including exporters. Therefore, in considering new allocation mechanisms, a combination of production and export history could be considered—in line with the new UK-FTA allocation mechanism. This would reduce the need for firms to transfer quota or return quota, thus reducing the frictions (and costs) in the system. In every year since 1999, the number of firms allocated quota under the production history approach increased between the initial allocation, and the final export quota holders. Figure 5.1 below illustrates this. This suggests that NZMB's initial allocation under the production history TRQ regime is sub-optimal.

By allocating quota based on both production and export history, NZMB can promote allocative efficiency, and improve the value generated from the respective quotas. Allocative efficiency will tend to lead to specialisation. Firms that produce meat products for export may excel at marketing and promoting export meat productions however, specialist export marketing firms may have better skills. The quota allocation system should not prevent quota being used by those specialist (non-producer) firms. While transfers of quota from producers to exporters during the quota year can result in a more efficient outcome, NZMB can promote efficiency by allocating at the beginning of the quota year to exporters.

**Figure 5.1: NZMB EU/UK WTO SG number of producing and/or exporting firms allocated initial quota compared to final quota holders**



Source: NZMB

#### *Conditions on NZMB's quota allocation mechanisms should be retained*

NZMB should retain the key conditions on the quota allocation mechanisms it administers. Each appears to be promoting the key objectives under the Act, and meeting the evaluation criteria used in our analysis:

- Transfers: The transfer system appears to be working, and appears unchanged since 2006. The rate of transfer of quota changes from year to year, and there are no systemic barriers to transferring quota
- Return of quota: The return of quota is an essential element of maximising value and promoting fairness
- Tolerance limit for unused quota: NZMB applies a low tolerance limit on quota holders for unused quota compared to other countries
- Penalties for unused quota: The current level of penalties appear to incentivise unused quota to be transferred or handed back, provided that the total quota allocation is indeed taken up
- Reserved quota for new entrants: The two percent reserved quota for new entrants appears to be sufficient.

#### *Administrative transition arrangements could follow tiered Australian approach*

NZMB's current allocation mechanism have been the same or very similar across all TRQs. In reaching our recommendation, we put weight on using a uniform mechanism across all TRQs. However, if there is variability in fulfilment, NZMB might consider the Australian approach. Australia has a tiered system that fits the allocation mechanism to the level of fulfilment. NZMB could consider a similar tiered approach in future, such as a three-tiered system:

- Tier one: Where quotas are under-filled, FCFS is used because this is low-risk of losing value and is relatively easy to administer.
- Tier two: If quotas are expected to reach fulfilment or are consistently close to the maximum, high-fill trigger is used.
- Tier three: If quotas are consistently filled and demand exceeds supply, a fully allocative mechanism is used (such as export and production history or auctions), which improves value maximisation but has higher administrative costs.

In this system, the administrator considers whether to graduate up to a higher tier automatically if quota allocation of a product class is exceeded two years in a row or three times in a 5-year period. This approach could be an option for NZMB if NZMB is concerned about administrative burden of using the recommended production plus export history option when quotas are being systematically underutilised.

*Auction mechanism could be re-considered if NZMB is comfortable that administrative costs can be managed*

We have recommended a combination of export and production history mechanism because on balance the administrative costs were more straightforward than for other mechanisms. An auction mechanism would in theory maximise marginally more value, but probably generate significant administrative costs, which based on recent under-fulfilment of quota would not be recovered from auction revenues. However, if NZMB considers that administrative costs of an auction mechanism could be covered, then it may wish to consider it.

## Appendix A: Summary of evaluated quota allocation mechanisms

Table A.1 presents a summary of the international quota mechanisms considered for evaluation.

**Table A.1: Summary of evaluated quota allocation mechanisms**

Exporting country	Importing country	Allocating entity	Product	Administration system	Notes
Australia	USA	Department of Agriculture, Fisheries and Forestry	Beef	<p><b>First come first serve (FCFS)</b><sup>14</sup></p> <p>Exporters must hold a meat export license allowing the holder to export beef to the USA</p> <p>[Trigger point] If 85% of quota is filled before Oct 1 each year, the remaining 15% of the quota is allocated proportionally based on an exporter's record of shipment to the US, averaged over the previous 2 years.</p>	<p>Quota year begins: 1 January</p> <p>Quota year ends: 31 December</p> <p>TRQ for red meat in place since 1995 under GATT.</p>
Australia	UK	Department of Agriculture, Fisheries and Forestry	Beef (As of 31 May 2023) <sup>15</sup>	<p><b>Split allocation (Export history) and FCFS</b></p> <p>Existing allocation holders (under 2022/23 HQB WTO quota) have access to 50% of the quota pool in years 1 and 2 (based on existing allocation). In year 3 and beyond, allocation based on previous quota year export history (volume shipped, not allocation size)—that is, amount shipped in year n-1 will be allocation for year n. Allocation year runs 1 Nov to 31 Oct.</p> <p>Non-allocation holders have access to 50% of the quota pool, and will be issued on a FCFS basis. This pool will reduce overtime as allocation is taken up by new allocation holders. That is, once it is fully allocated the non-allocation holders pool will be exhausted.</p>	<p>This follows the Australia-United Kingdom Free Trade Agreement (A-UK FTA)</p> <p>No penalties for unused quota (but unused quota will not count towards the following years allocation). i.e. use it or lose it.</p> <p>Quota allocations can be traded.</p>

<sup>14</sup> <https://www.agriculture.gov.au/biosecurity-trade/export/from-australia/quota/us-quotas/us-beef-quotas#trigger-point-provisions>

<sup>15</sup> <https://www.agriculture.gov.au/biosecurity-trade/export/from-australia/quota/uk-eu-quotas/uk-beef-meat-quota>

Australia	UK	Department of Agriculture, Fisheries and Forestry	Sheep meat <sup>16</sup>	<p><b>Allocated (Export history)</b> (as of 31 May 2023)</p> <p>Initial allocations based on prior export history.</p> <p>100% of available volume will be allocated each quota year, unless the previous quota year utilised over 95% of total annual volume. In this case, 95% of the available volume will be allocated.</p> <p>Invitations to apply for the quota are sent to eligible exporters based on previous shipping history.</p> <p>Years 1 and 2 are based on performance from 2021 WTO Sheepmeat quota.</p> <p>Year 3 and onwards will be based on the previous quota years amount of product shipped.</p> <p>A reallocation process will be run each October, where allocation holders can return quota they will not need, retain quota, or request additional quota for the remainder of the year.</p>	
Australia	EU and UK	Department of Agriculture, Fisheries and Forestry	Sheepmeat and Goatmeat <sup>17</sup>	<p><b>Allocation (Export history)</b></p> <p>TRQ allocations available to exporters based on prior history of shipping. Takes into account quantity of sheepmeat and goatmeat shipped using TRQ arrangements, as well as consideration of global shipments.</p> <p>Consideration of global shipments creates a pathway for new entrants to the EU and UK quota markets.</p> <p>Eligible exporters are invited to apply for allocation prior to the start of the quota year.</p> <p>An exporters initial allocation is based on this formula, as defined in the rules<sup>18</sup></p>	<p>Different methods of allocation are used for UK FTA-eligible meat and EU-eligible meat or UK WTO-eligible meat.</p> <p>Unclear if replaced by new UK FTA agreement.</p> <p>Quota allocation for EU and UK has become separate since Brexit.</p> <p>EU also has an <i>Erga omnes</i> quota— 200 tonne erga omnes sheepmeat and goatmeat quota accessed by multiple countries. This quota is managed by EU, not by AUS.</p>

<sup>16</sup> <https://www.agriculture.gov.au/biosecurity-trade/export/from-australia/quota/uk-eu-quotas/uk-sheepmeat-quota>

<sup>17</sup> <https://www.agriculture.gov.au/biosecurity-trade/export/from-australia/quota/eu-sheepmeat-quotas#sheepmeat-and-goatmeat-quotas>

<sup>18</sup> <https://www.legislation.gov.au/Details/F2023C00109> (Part 2, section 12)



For the purposes of the method statements in subsections 10(1) and (1A), the formula is the following:

$$0.8 \times A.A \times \frac{\text{Applicant's quota exports}}{\text{Total quota exports}} + 0.2 \times A.A \times \frac{\text{Applicant's accredited exports}}{\text{Total accredited exports}}$$

80 percent of an exporters allocation is determined by the exporters previous year's exports to the EU(UK) as a proportion of total exports to the EU(UK). The remaining 20 percent is determined by the exporters previous years exports to the rest of the world (of product sourced from an EU accredited supplier) as a proportion of total exports to the rest of the world (of product sourced from an EU accredited supplier).

If an exporters initial allocation is calculated to be less than 12,000 kg, the exporter is excluded from the allocation. Total amounts excluded are added to a new allocation pool, which is allocated to the remaining eligible exporters using the same formula as the initial allocation.

Exporters will also be penalised if their total exports from the previous year was less than 90 percent of their allocation for the previous year.

The penalty amount for the following quota year will be half the amount of difference between the allocated quota and the total exports.

The penalty will apply after the initial allocation calculation, before considering if the exporter had less than 12,000 kg of exports. That is, if an exporters previous years total exports with the penalty amount subtracted is less than 12,000 kg then the exporter will be excluded from the allocation.

Records of each exporter's shipments to the UK, EU and global (where product is sourced from an EU accredited works) are kept by the quota administrator. The global performance records can be transferred to another exporter, effectively increasing the shipping history of the transferee, resulting in a larger quota allocation in the following year.

<b>Australia</b>	EU and UK	Department of Agriculture, Fisheries and Forestry	High-quality beef (HQB) (UK) <sup>19</sup>	<p><b>Allocation (Export history) with FCFS (as at 29 March 2023)</b></p> <p>HQB quota to be allocated as an entitlement to applicants calculated based on a three-year shipping history, with penalties for underuse of quota entitlements.</p> <p>250 tonnes (each for UK and EU) is allocated towards new entrants in a separate pool.</p> <p>Exporters are ‘new entrants’ if they have not received a HQB allocation in the previous three years (and meets other requirements).</p> <p>Individual new entrant applicants are limited to 80 tonnes to each of EU and UK in a quota year.</p> <p>Exporters are considered new entrants for 3 years to allow the buildup of shipping history, and thereafter join the standard allocation pool.</p> <p>The new entrant pool is allocated on a FCFS basis.</p> <p>Allocation holders can return unused quota by Feb 15, which can then be reallocated. This includes new entrants; however, new entrants are still limited to a maximum of 80 tonnes per year after reallocation. New entrants’ additional allocation request cannot be for a larger quota than their initial allocation. I.e., if a new entrant is granted 20 tonnes of quota at the start of the year, they may request up to 20 tonnes of additional quota, but not more, during the reallocation process.</p>	<p>Quota year runs 1 July to 30 June.</p> <p>Unclear if UK FTA replaces UK allocation once commenced.</p> <p>General rules available at:  <a href="https://www.legislation.gov.au/Details/F2023C00106">https://www.legislation.gov.au/Details/F2023C00106</a></p>
<b>South Africa</b>	EU and UK	Department of Agriculture Forestry and Fisheries (DAFF) /DALRRD	Canned Fruit	<p><b>Export history + socio economic scoring measure<sup>20</sup></b></p> <p>Exporters with a prior shipment history of at least 3 years can apply for larger quantities.</p> <p>Allocation also depends on the exporters Broad Based Black Economic Empowerment (BBBEE) scoring.</p>	<p>Process has been criticised for potentially allowing inefficiencies due to the requirement of BBBEE compliance</p>

<sup>19</sup> <https://www.agriculture.gov.au/biosecurity-trade/export/from-australia/quota/eu-hqb-and-grain-fed-beef-quotas#reclaim-and-reallocation-of-quota-for-hqb>

<sup>20</sup> <https://www.mdpi.com/2227-7099/9/4/155>

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Allocation is carried out in two rounds. First round allows for allocation between exporters rated as BBBEE compliant. The second round reallocates unused quota between exporters, including those who are BBBEE non-compliant.

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# Appendix B: Section 4 extended analysis of the production history mechanism

This appendix contains the extended analysis from section 4.

## B.1 Maximising value

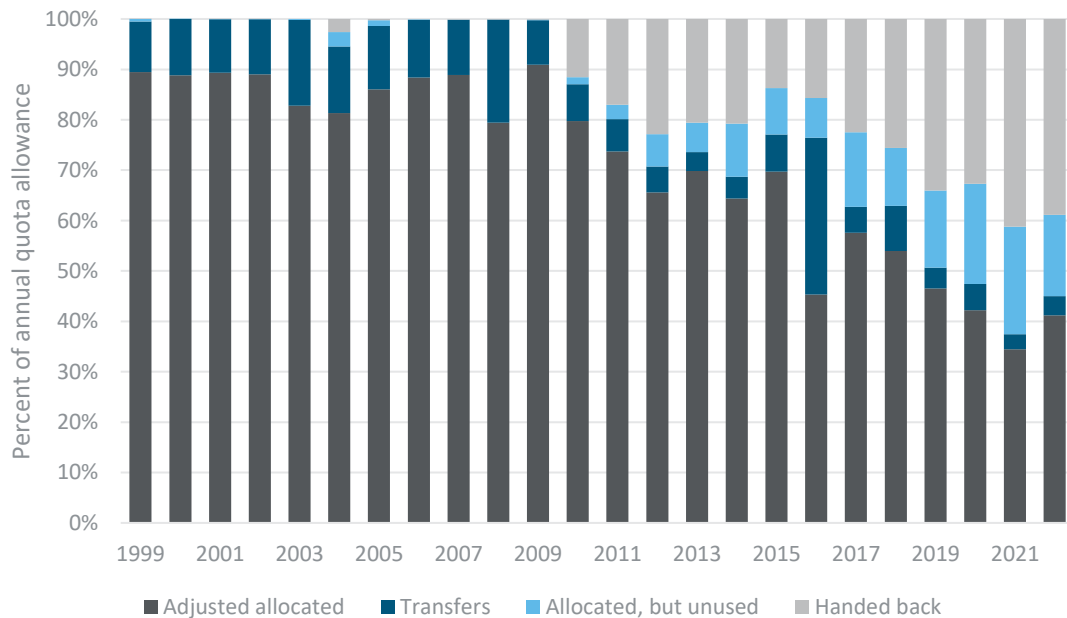
### Quota transfers

Figure B.1 shows annual quota allocations and transfers for NZMB’s EU/UK WTO SG quota. We see in years up to 2009, when the annual quota allowance was fully utilised, an average of 12.5 percent of utilised quota was transferred. In years since 2009, transfers averaged 6.8 percent—a 46 percent reduction. This trend suggests that NZMB’s penalty regime (applied in times of high quota demand) successfully incentivised transfers in years of high quota demand.

Quota holder firms are incentivised to transfer or hand back excess quota through penalties. Firms that do not use their allocation have the following year’s allocation reduced. NZMB’s penalty system includes a tolerance limit before penalties apply. The tolerance limit is the larger of 0.5 percent of a quota holder’s annual allocation, or 25 tonnes. This is small compared to other mechanisms we evaluated (Australia typically has a ten percent tolerance limit for most of its shipping history mechanisms). A smaller tolerance limit is likely to be more effective at reducing the risk of quota non-utilisation.

Currently, the penalty regime is suspended due to low demand for quota. We understand that each year, the NZMB Board will determine if any demand for quota is unable to be met due to hoarding. If there is no unmet demand, the penalty regime is suspended.

**Figure B.1: NZMB EU/UK WTO SG annual quota allocations and transfers**

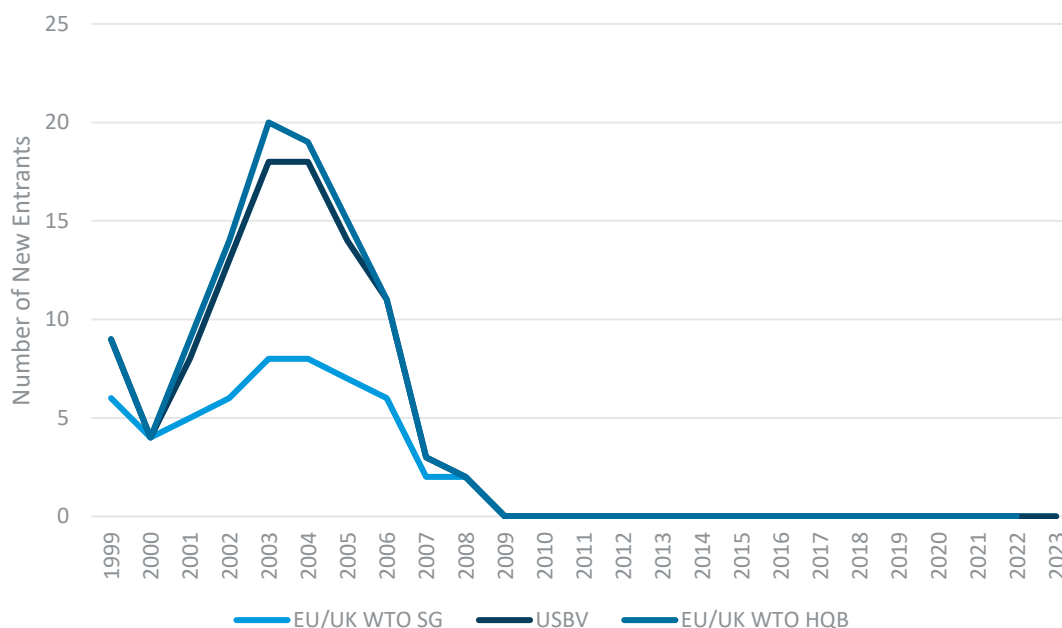


Source: NZMB

**New Entrant quota**

NZMB data reveals that reserved quota pools for new entrants have not been utilised since 2009. This trend is consistent across all of NZMB’s red meat quotas.

**Figure B.2: NZMB number of New Entrants using the reserved quota pool**



Source: NZMB

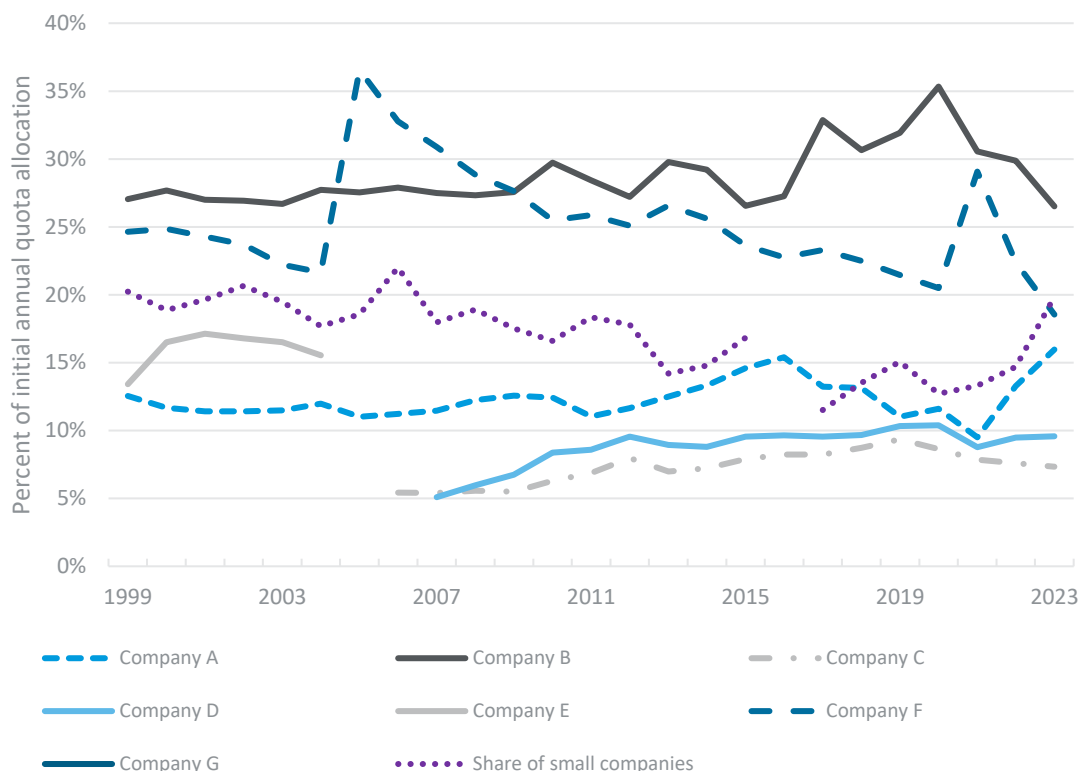
**B.1.1 Fairness**

**Market structure:**

NZMB data on the EU/UK WTO SG quota allocation market structure suggests that the production history mechanism is fair. Figure B.3 shows that there is a diversity of suppliers, with five large companies each receiving at least five percent of the annual quota allowance, and market share fluctuates year to year. New entrants have emerged. Smaller companies (those that receive less than five percent of the annual quota allowance) also play a sizeable role in the EU/UK WTO SG market. Combined, the small companies tend to receive between 11 to 22 percent of the initial annual quota allocation.

NZMB data also suggests that the EU/UK WTO HQB and USBV quota allocation markets are fair. The EU/UK WTO HQB market has typically had six large companies that each receive at least five percent of the annual quota allowance, and the USBV market had seven from 2004 to 2019. However, both markets have become less reliant on small companies over time, when compared to the EU/UK WTO SG market. Figure C.2 and Figure C.7 (in Appendix C) show that, in recent years, small companies tend to receive less than 5 percent of the respective initial annual quota allocations.

**Figure B.3: NZMB EU/UK Sheepmeat and Goatmeat producers with over five percent of initial quota allocation**



Source: NZMB

**Quota transfer system**

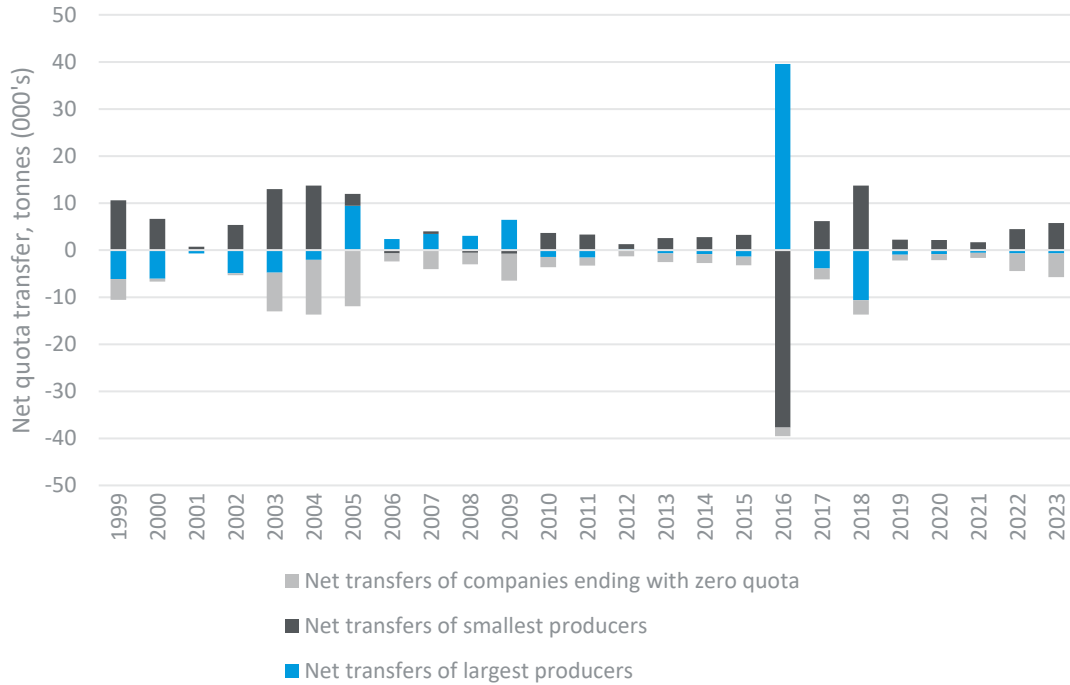
The system allows quota holders to transfer quota allowance to other companies, including companies that did not receive an initial allocation (provided the company meets the relevant export eligibility criteria). The quota transfer system allows smaller producers to export more product than their production history would otherwise allow. The quota transfer system also allows non-producing exporters to access quota and participate in the market. However, access to quota via the transfer system is reliant on initial allocation holders having excess quota that they are willing to trade, something that may be less likely when the quota fulfilment rate is high. Previous exporters are therefore not guaranteed a right to future allocations. Figure B.4 shows how the quota transfer system works for the EU/UK WTO SG market. In the EU/UK WTO SG market, quota transfers tend to flow from larger companies to smaller companies.<sup>21</sup> This supports the theory that the quota transfer system makes the market fairer by providing another avenue for small producers to gain quota.

However, the flow of transfers from large to small companies is not seen in the USBV and EU/UK WTO HQB markets. Figure C.3 and Figure C.8 contained in Appendix C, show that

<sup>21</sup> Data in 2016 is distorted by a large internal transfer between two related entities. 2016 should be treated as an outlier to the trend.

transfers tend to flow in the opposite direction in these markets, with small producers appearing to transfer quota to larger producers.

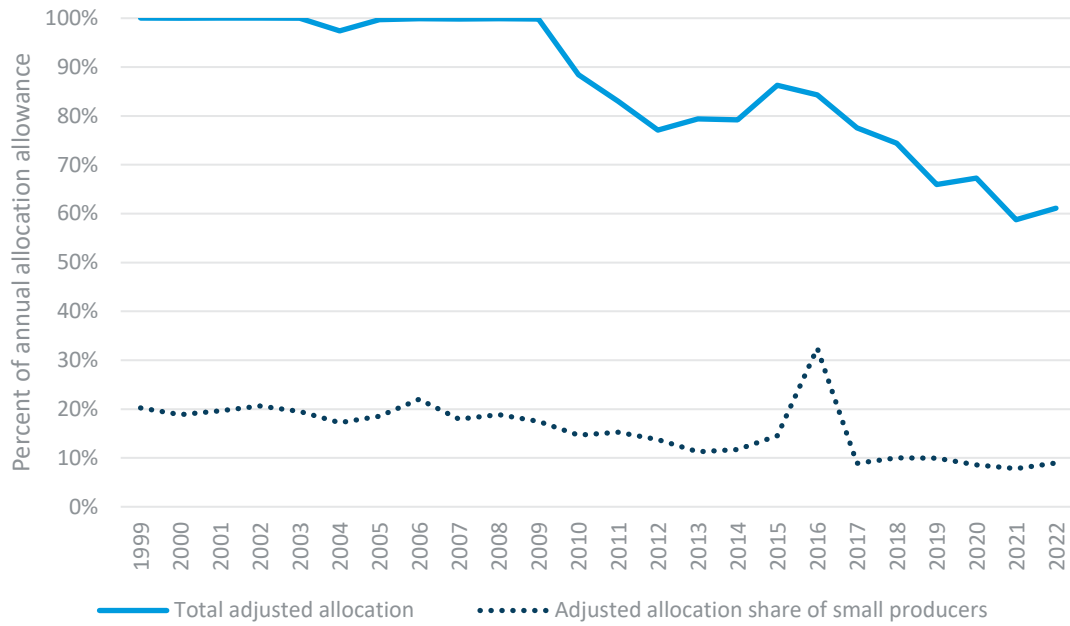
**Figure B.4: NZMB EU/UK WTO SG net transfers by company type**



Source: NZMB

Figure B.5 shows the adjusted total quota allocation (the amount of quota assigned to firms after excess quota is returned to NZMB) and the adjusted quota allocation held by small producers in each year of the EU/UK WTO SG quota. We see that small producers typically hold between 10 to 20 percent of the adjusted quota each year. This shows that small producers are consistently receiving a share of the final quota, which suggests the system is fair between smaller and larger producers.

Figure B.5: NZMB EU/UK WTO SG total and small producer final quota allocations



Source: NZMB

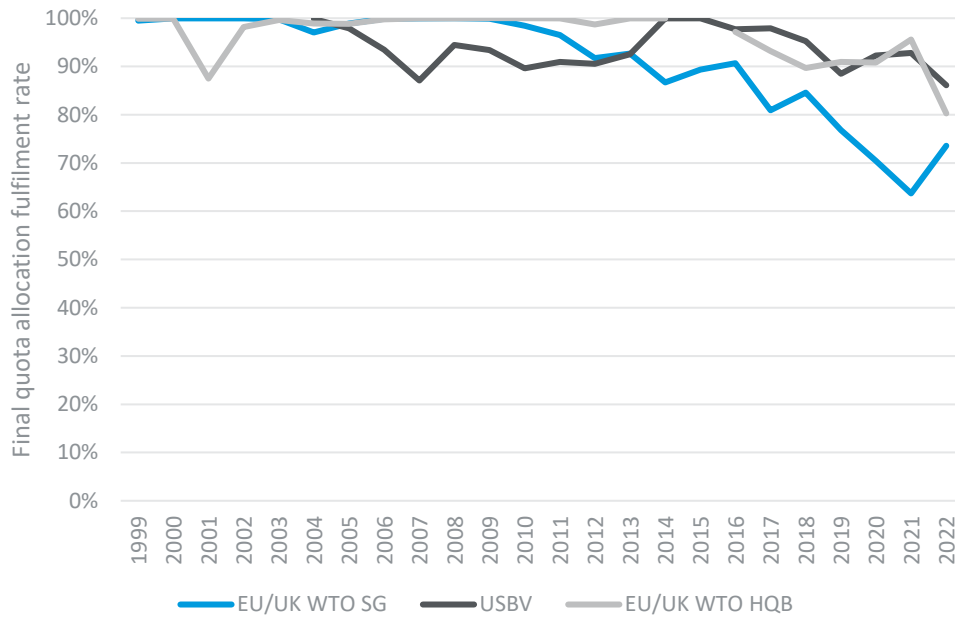
### B.1.2 Risk

#### Quota utilisation rate

All three quotas under the NZMB production history allocation mechanism have excess quota that quota holders’ hand back to NZMB. This results in a very low risk of quota non-utilisation. However, the risk is higher for the EU/UK WTO HQB quota as, on average, demand is higher, and a smaller percent of quota allowance is returned to NZMB compared to the EU/UK WTO SG and USBV quotas. The utilisation rates of allocated quota are presented in Figure B.6.



**Figure B.6: Final quota allocation rates for NZMB production history allocated quotas**

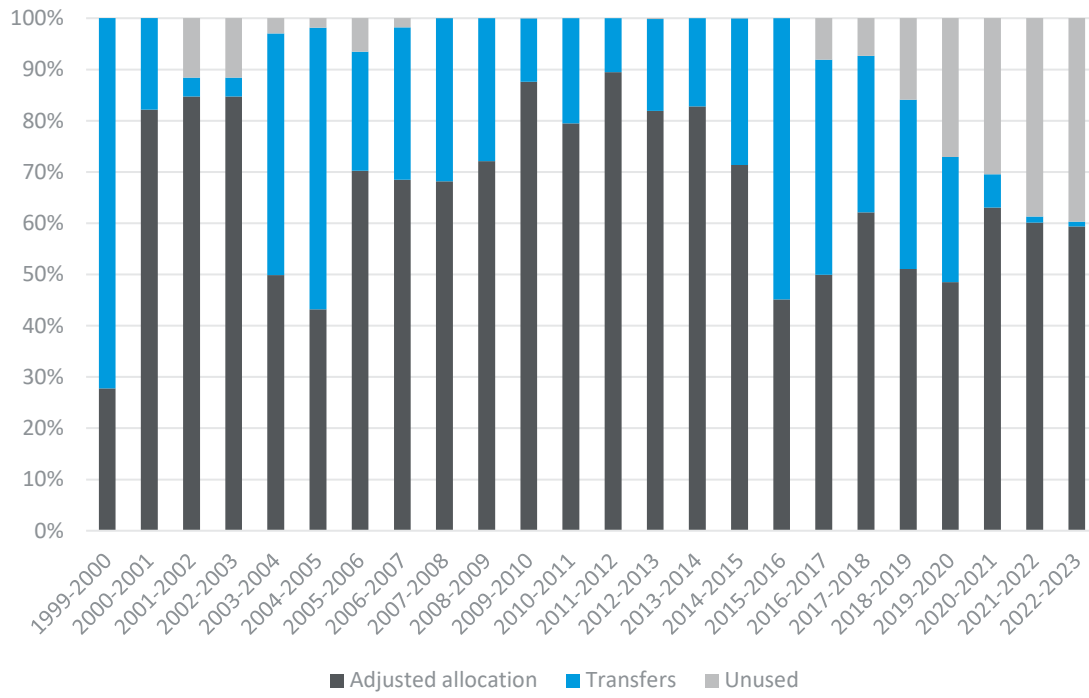


Source: NZMB Adjusted allocation vs Quota Certificates issued

**NZMB’s transferability of quota reduces risk of non-fulfilment**

NZMB’s quota transfer system also reduces the risk of quota non-fulfilment, as it provides the opportunity for excess quota to be re-distributed to other exporters. For example, quota transfers reduce quota non-fulfilment risk in NZMB’s EU/UK WTO HQB market. Figure B.7 shows that transfers increase in years when quota fulfilment is at or near 100 percent, suggesting that quota is being transferred from companies with excess quota to other exporters to maximise the value of the annual quota allowance. Additionally, transfers have decreased in recent years, as quota under-utilisation has occurred. This indicates that, when demand for quota is high, NZMB’s mechanism works well to minimise the risk of quota non-fulfilment.

Figure B.7: Use of transfers to reduce quota non-fulfilment in the EU/UK WTO HQB market



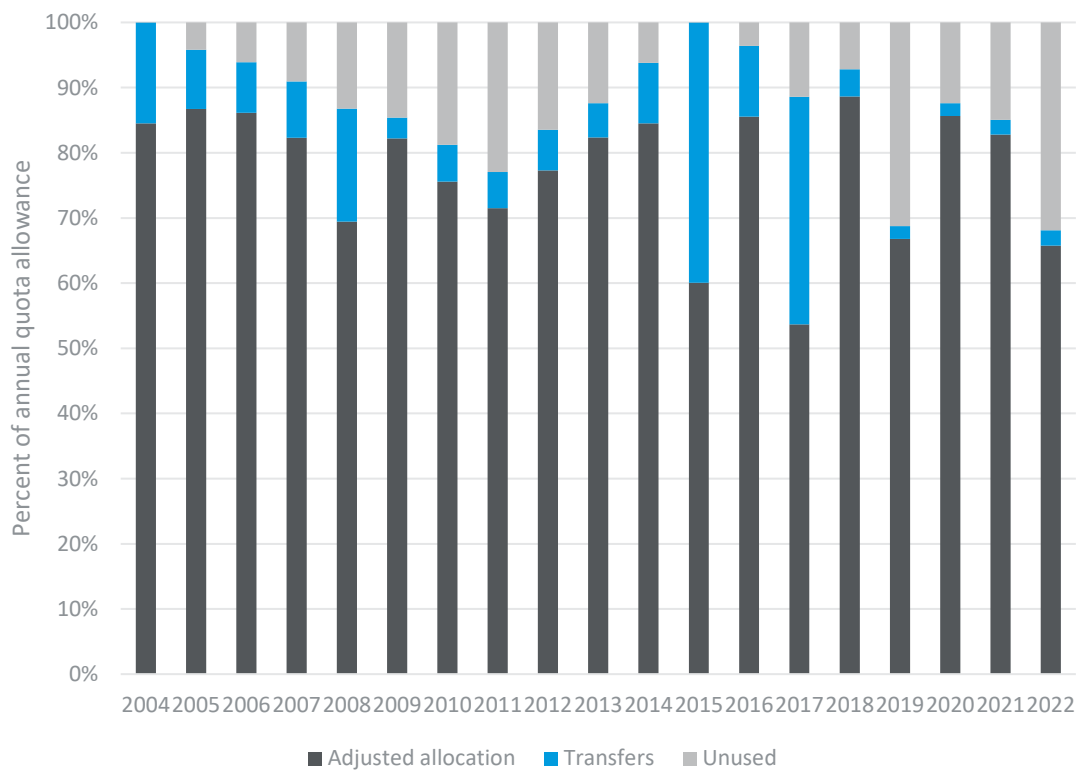
Source: NZMB

# Appendix C: Graphs of NZMB USBV and EU/UK WTO HQB

This appendix provides graphs showing data from the NZMB US Beef and Veal (section C.1) and EU High Quality Beef (section C.2) quotas. Some of the graphs are cross-referenced in the main report, and can be used to compare evaluation criteria among the different quota.

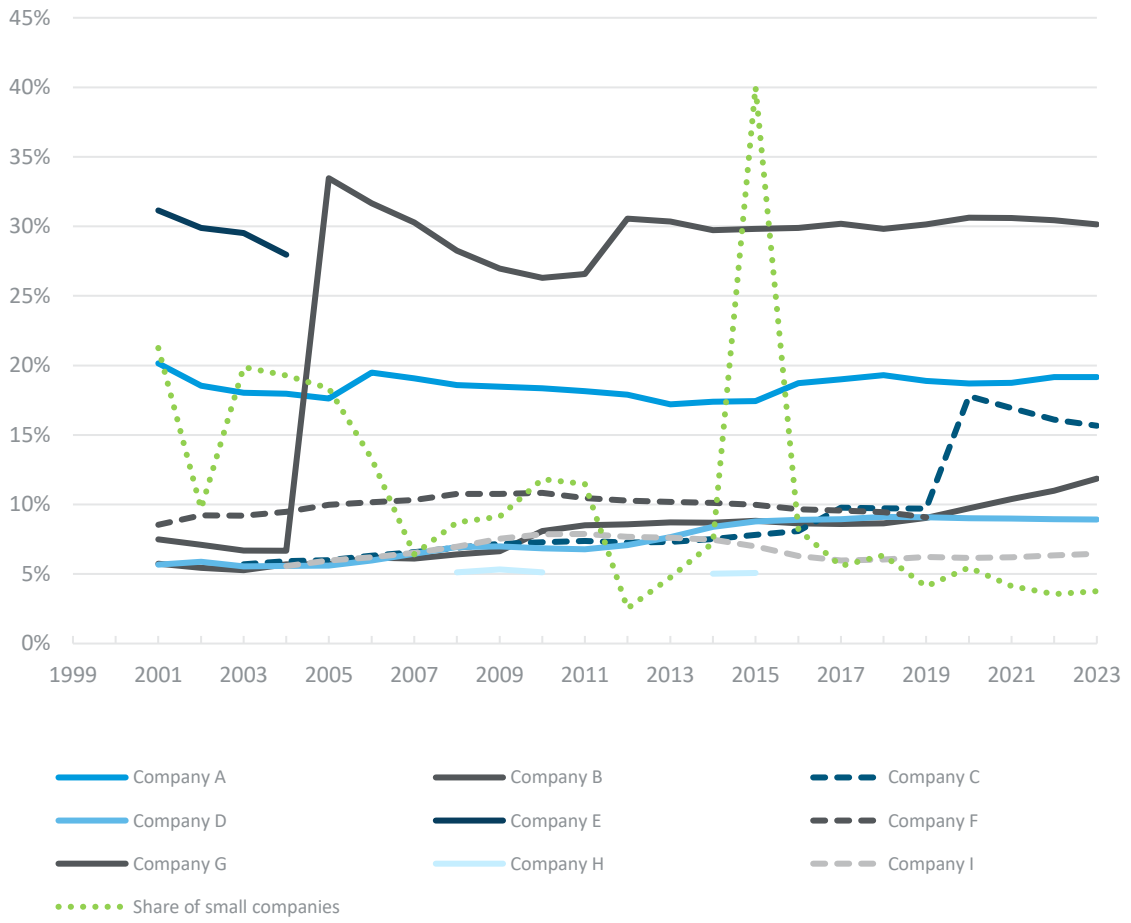
## C.1 NZMB USBV graphs

Figure C.1: NZMB USBV annual quota use



Source: NZMB

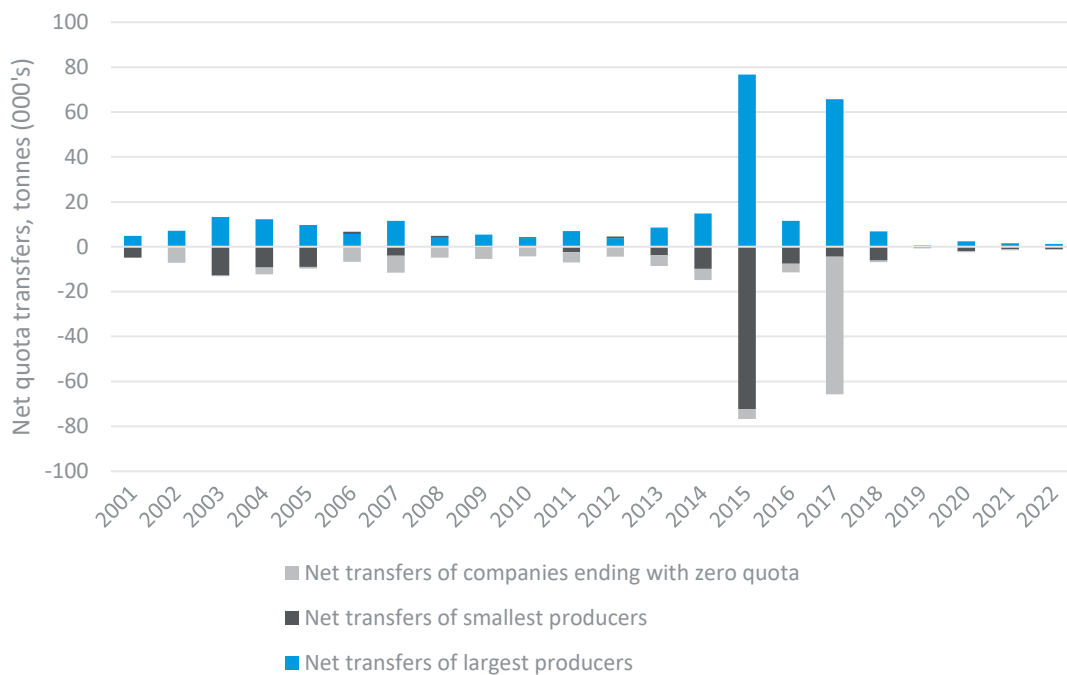
Figure C.2: NZMB USBV producers with over 5 percent of initial quota allocation



Source: NZMB

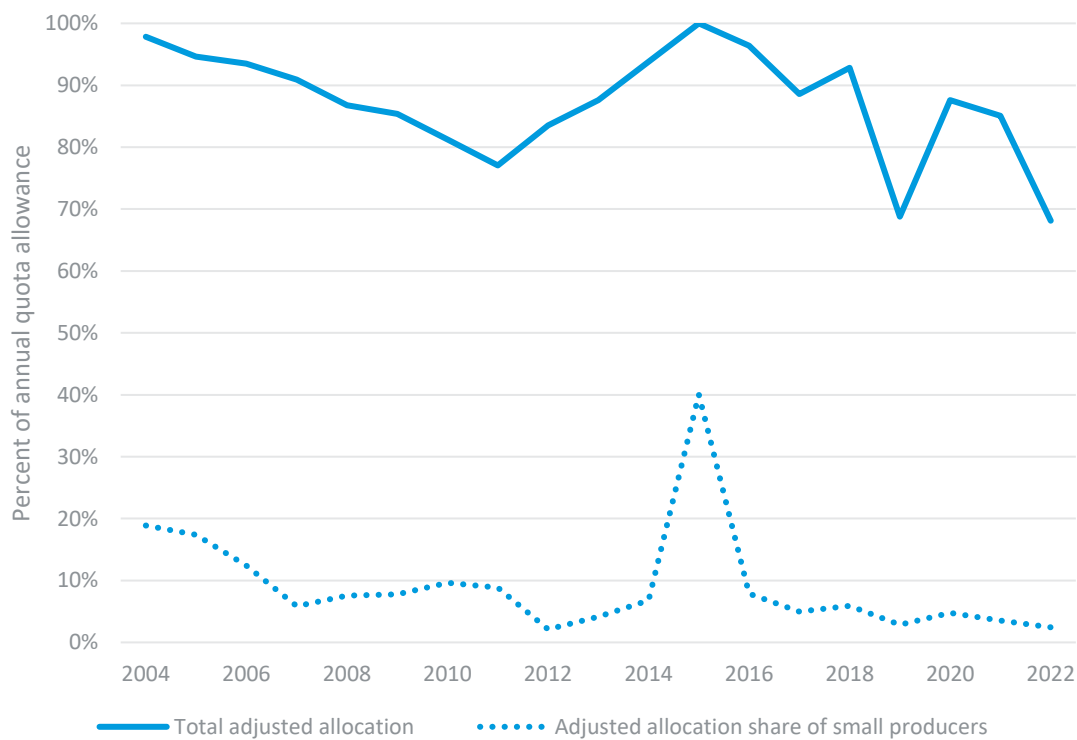
For Figure C.3, transfers in the USBV market flow in the opposite direction to the EU/UK WTO SG market. In the USBV market, transfers flow from the small producers to the large producers.

Figure C.3: NZMB USBV net transfers by company type



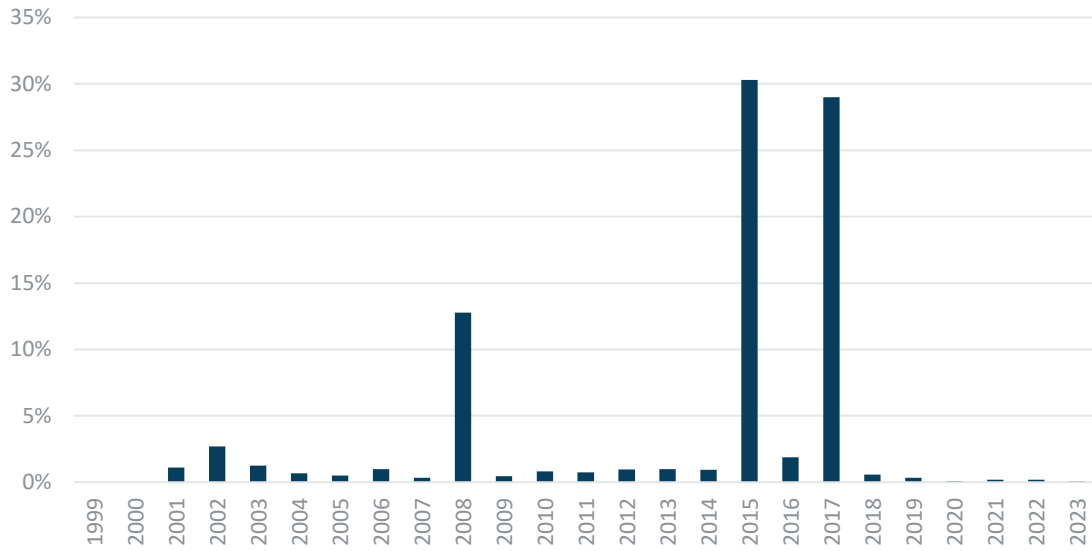
Source: NZMB

Figure C.4: NZMB USBV final quota allocations



Source: NZMB

Figure C.5: NZMB USBV Percent of annual quota allowance transferred to non-allocated companies

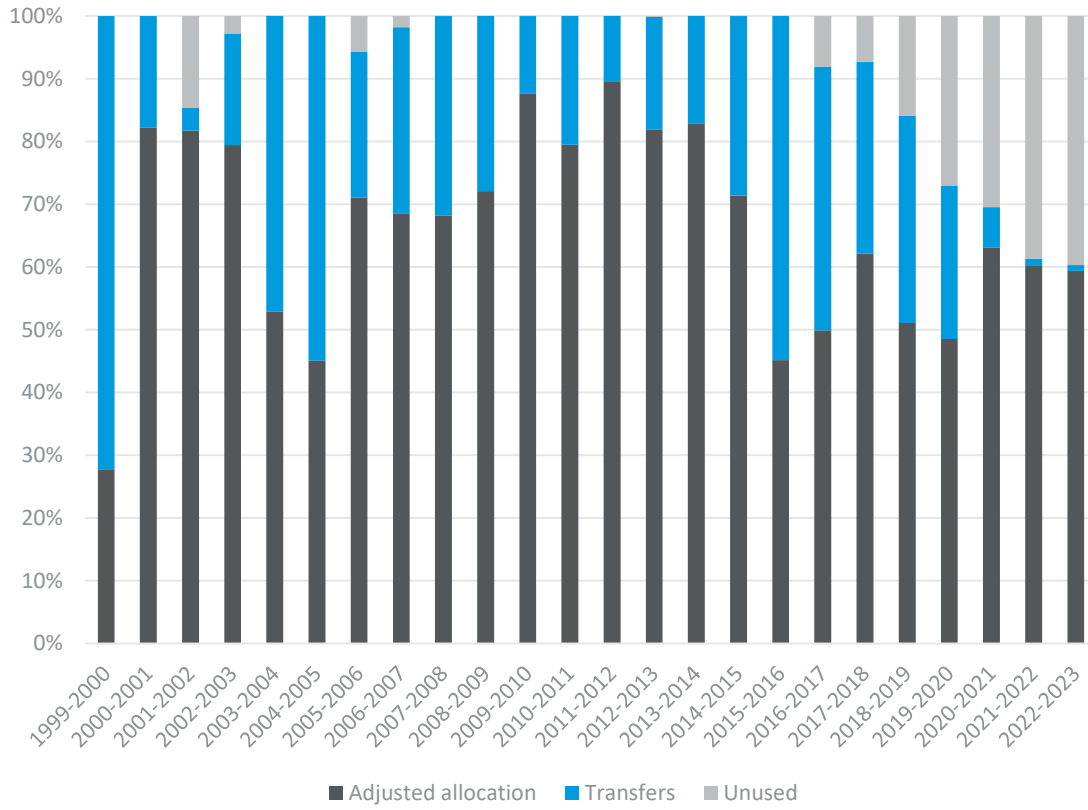


Source: NZMB

2008, 2015 and 2017 spikes should be seen as outliers caused by company takeovers and large internal transfers between subsidiary companies.

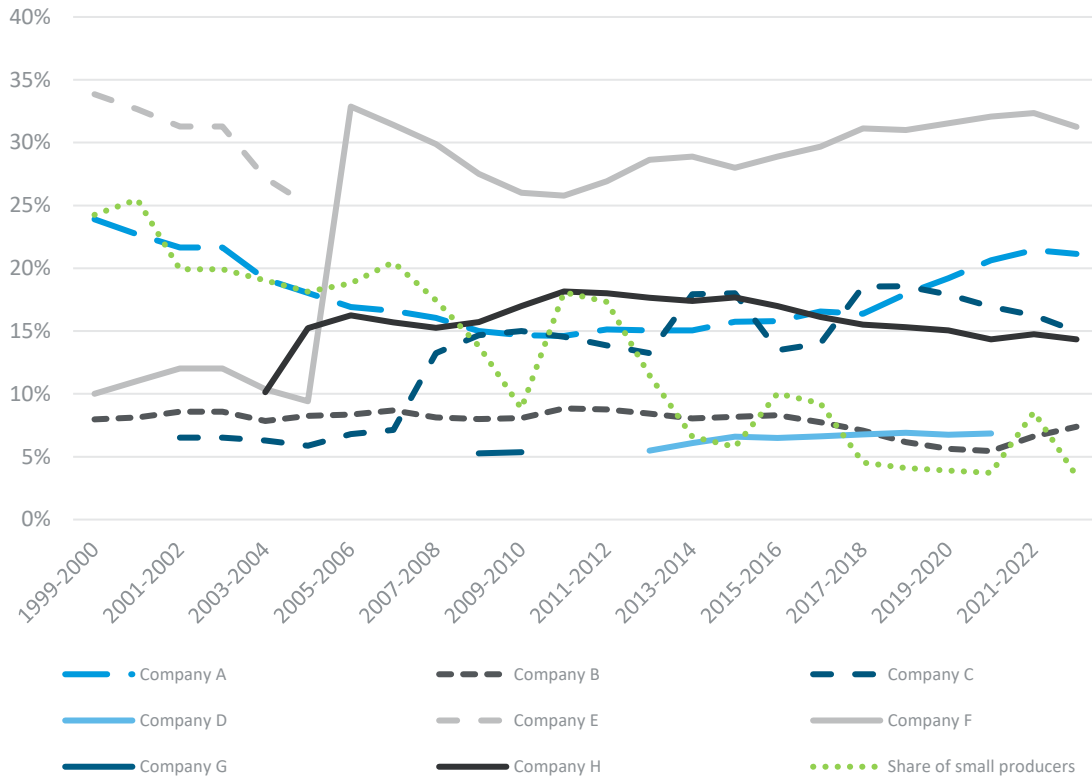
## C.2 NZMB EU/UK WTO HQB graphs

Figure C.6: NZMB EU/UK WTO HQB annual quota use



Source: NZMB

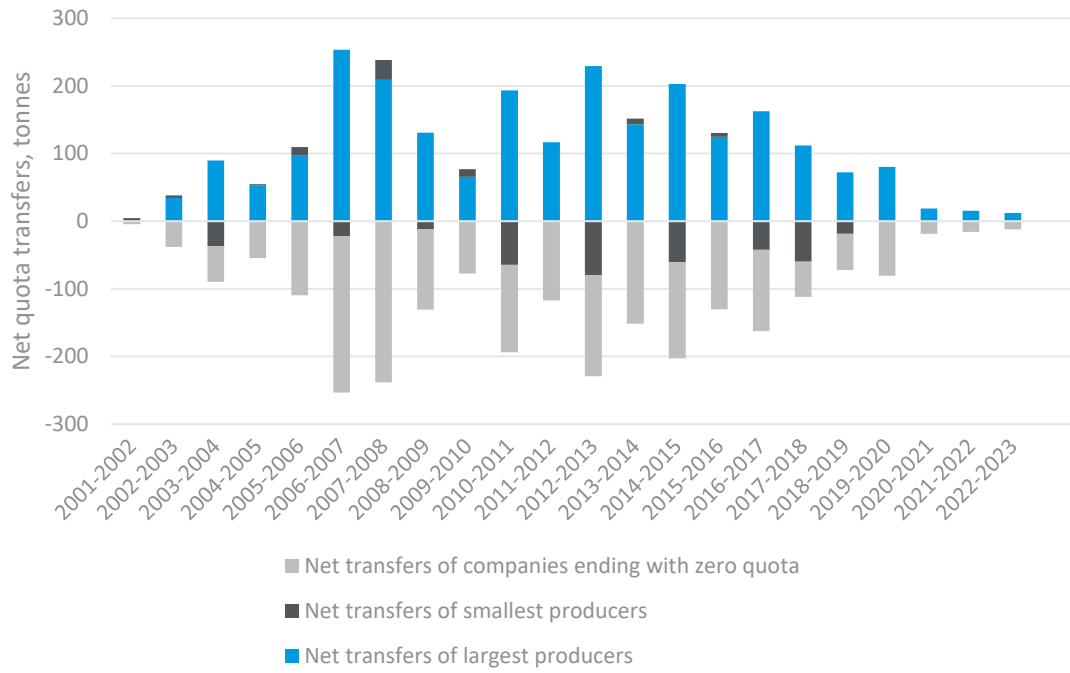
Figure C.7: NZMB EU/UK WTO HQB companies with over 5 percent of initial quota allocation



Source: NZMB

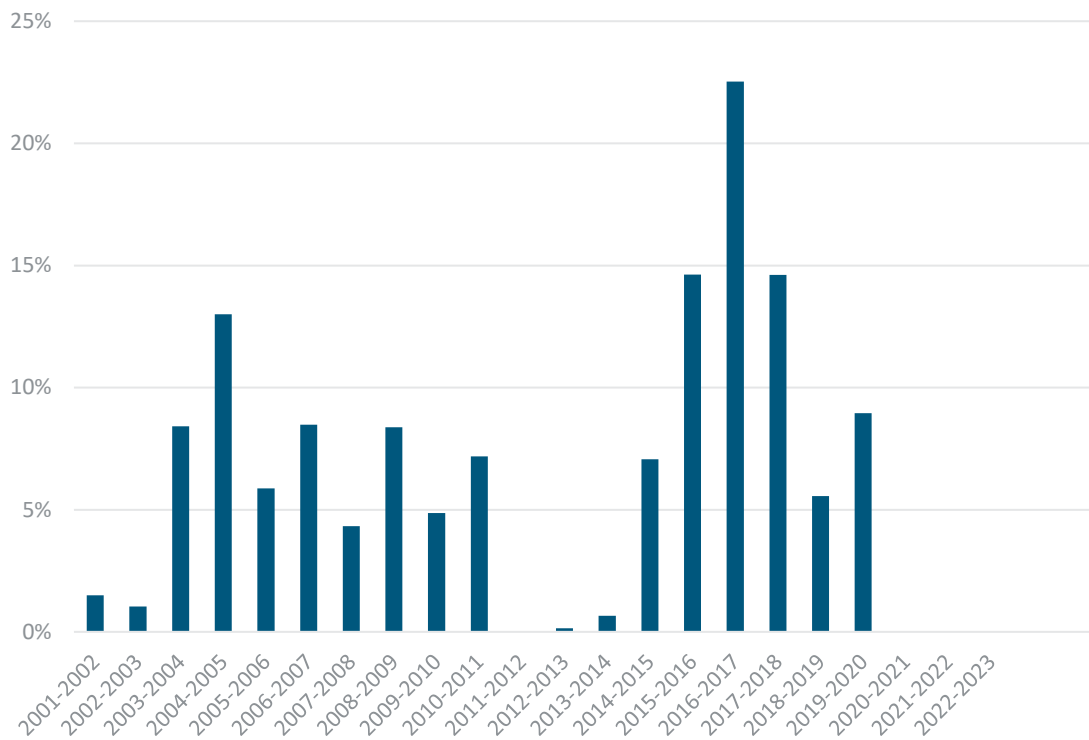


Figure C.8: NZMB EU/UK WTO HQB net transfers by company type



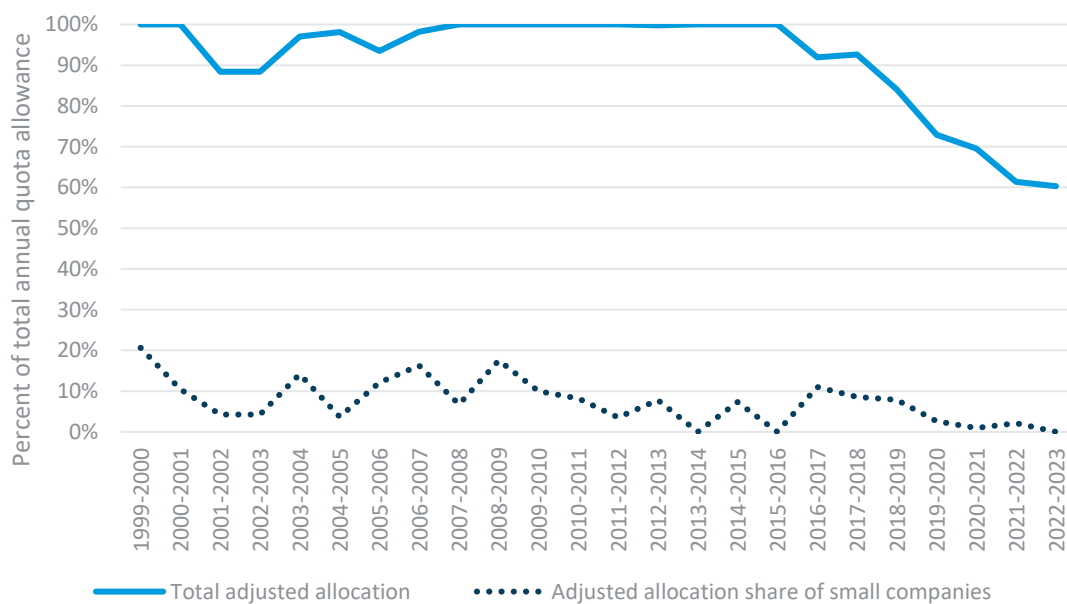
Source: NZMB

**Figure C.9: NZMB EU/UK WTO HQB Percent of annual quota allowance transferred to non-allocated companies**



Source: NZMB

**Figure C.10: NZMB EU/UK WTO HQB final quota allocations**



Source: NZMB

*Small companies are companies with less than 5 percent share of the total annual quota allocation*

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