QUARTERLY ECONOMIC NEWSLETTER

EVE ONLINE
4rd Quarter 2010

CCP

QUARTERLY ECONOMIC NEWSLETTER

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PUBLICATION INFORMATION

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EDITORIAL

This quarter was an unusual one for EVE Online for several different reasons. Starting at a slow pace, it quickly jumped into overdrive once the details of the Incursion expansion started to become clear. The introduction of a new salvage ship (the Noctis), removal of learning skills, and excitement about the final release of the Incursion feature in January all contributed to a very active Q4 of 2010. So active, in fact, that we saw the daily trade value record increasing twice in December, ending in an incredible 1.8 trillion ISK's worth of trades in a 24-hour period, in more than 1.2 million individual trades – and this is only on the main EVE market, not taking into account contracts or direct trade between players.

Q4 was therefore a good end to a good year for EVE Online. However, success does not come without its challenges. Increased demand, along with changes to the faucet/sink system of EVE, has changed the balance of ISK floating in and out of the EVE economy. The ever increased popularity of PLEX (Pilot License Extension – an in-game item that can be changed into game time or sold for in-game currency) adds complexity to the management of the money supply since we now not only need to monitor the total amount of ISK within the game, but also how fast money flows (known as velocity of money in the money supply equation MV=PQ). Though the Central Bank of EVE does not see a reason for alarm, it has voiced its concerns and proposed changes to be made to the faucet/ISK balance, which might include anything from bounty changes and NPC price changes to changes in taxes.

With a growing PLEX market (PLEX is the item with the highest trade value on the EVE market on any given day) and its function of facilitating the exchange of game time for ISK, players have become concerned about PLEX prices. PLEX is sold on an open market in a free exchange between players, just like most other items in EVE Online. Our core design principle of being hands-off from these markets also applies to the PLEX market. However, due to its complex function and potential impact on the velocity of money supply, the Central Bank might intervene in the PLEX market in

order to curb inflation or avoid sudden deflation in the EVE economy. All such action would not be announced beforehand and only limited information would become public in the quarter after actions have been taken. These actions would aim at stabilization of the PLEX market and do not have a specific price target for PLEX or a specific inflation target for prices in EVE.

Looking back at 2010, we at CCP are very pleased about what has been achieved for EVE. The player-driven nature of EVE is the engine that makes it what it is at any given time, and we are grateful for our strong community and their dedicated representatives in the Council of Stellar Management. For the editor of this newsletter, there is no doubt in his mind that the interaction and dialogue between CSM and CCP has made EVE a better world for everyone. The constant scrutiny and pressure from a democratically elected council toward the makers and operators of a virtual world is one of many necessary channels we need to have between ourselves and our community. I want to thank the CSM5 for their dedication and I look forward to meeting the new CSM 6 representatives. It has been a privilege to work on the CSM project.

In the words of Ernest Hemingway: "There is no hunting like the hunting of man, and those who have hunted armed men long enough and liked it, never care for anything else thereafter."

Keep on hunting your enemies – it is good for the EVE economy!

Dr. EyjoG

POPULATION

Total population in EVE grew overall in Q1 of 2010, but with some fluctuations. Q3 saw a decrease in accounts which continued into Q4, but by mid-Q4 the tide again turned and EVE continued its growth. This fits well with the cyclical behavior previously observed, where population and activity peak around expansions and then drop again in the time between. The year ended with around 360,000 accounts, with 725,000 different characters in-game. The average number of characters per account is just over 2. This number has remained very stable over the years.

Figure 1 shows the 30-day moving average of accounts in EVE from June 2003 until the end of December 2010. As can be seen the cyclical behavior has increased over the years, but year-over-year growth has always been positive. The total number at end of 2010 was 357,000 accounts – the highest end-of-year number for EVE Online from the beginning of EVE time.

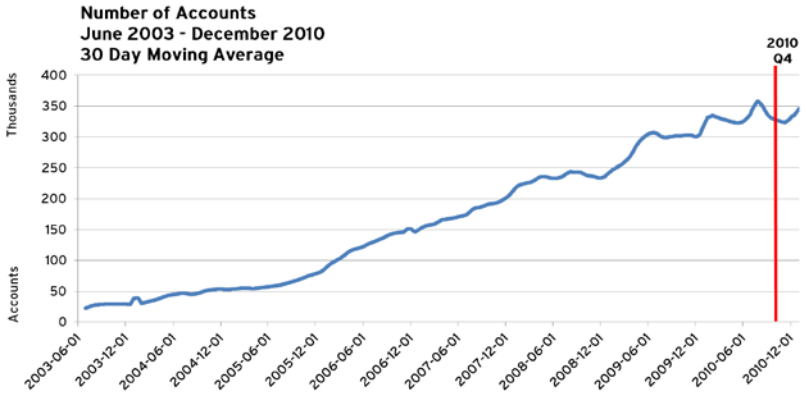


Figure 1: Number of active accounts in EVE from June 2003 through 2010

Basic demographics such as the population share of each race and the female-to-male character ratio have changed relatively little since we last looked at those numbers in Q1 of 2009. Average skill points per character have increased by about 5% to 10% varying by race. The Caldari and Gallente have about 15 million skill points on average per character, while the Minmatar have about 12 million and the Amarr just over 11 million.

POPULATION DISTRIBUTION

The data for this section is based upon snapshots of the Tranquility database taken at the end of each quarter. This information shows where characters on active accounts were located at those times. For purposes of area comparison, we have grouped regions by geographical location to create eleven sectors within the EVE universe. These include the four empire factions, with Derelik and Khanid considered part of the Amarr sector, wormhole space comprising its own sector, and six sectors covering null security space. Null security space is divided as follows:

North	West	South	South East	East	North East
Geminate	Deklein	Delve	Providence	Great Wildlands	Cobalt Edge
Vale of the Silent	Fade	Querious	Catch	Curse	Outer Passage
Tribute	Pure Blind	Period Basis	Immensea	Scalding Pass	Oasa
Venal	Cloud Ring	Stain	Tenerifis	Wicked Creek	Perrigen Falls
Branch	Outer Ring	Esoteria	Impass	Insmother	Malpais
Tenal	Syndicate	Paragon Soul	Feythabolis	Detorid	The Kalevala Expanse
	Fountain		Omist	Cache	Etherium Reach
					The Spire

Table 1: The six sectors of null security space.

In empire space, this quarter saw a shift towards Caldari and Minmatar space, with a smaller proportion of characters being located in Gallente and Amarr space. The Amarr sector had the lowest population density of the empire sectors, with 176.91 characters per system as compared to the highly populated Caldari sector, which had over four times that at 778.12 characters per system.

Sector	Systems	Population Q3 2010	Population Q4 2010	% change	Pop. Density
Caldari	326	229,278	253,671	0.17%	778.13
Minmatar	280	95,762	106,003	0.22%	378.58
Gallente	388	129,046	141,879	-0.46%	365.67
Amarr	913	147,762	161,521	-1.03%	176.91
North	513	16,093	19,659	10.60%	38.32
West	500	19,461	23,476	9.22%	46.95
East	564	10,468	12,409	7.33%	22.00
South	488	12,058	12,223	-8.22%	25.05
Southeast	540	12,132	12,021	-10.29%	22.26
Northeast	689	6,787	6,699	-10.63%	9.72
Unknown	2,499	16,846	18,812	1.11%	7.53

Table 2: The above table shows the sectors that we have divided EVE into, with the number of systems and their total population at the end of Q3 and Q4 2010. The % change shows the change in the population of those sectors compared to the previous quarter relative to the overall population. Population density shows the average number of characters per solar system in each sector.

Null security has seen further growth in the north and west sectors, which can still be attributed to the membership growth of the alliances resident in those regions. Meanwhile, large-scale conflict in the southeast and northeast throughout the last quarter may have been a significant cause of the population decline in those areas. Whilst the rate of population growth in wormhole space has slowed, it still saw an increase in Q4 2010. Since Q4 2009, the population density there has increased from 4.52 to 7.53.

Type	Population Q3 2010	Population Q4 2010	Q3 % of Total	Q4 % of Total	Change
High Sec	553502	611732	79.56%	79.61%	0.05%
Low sec	48346	51342	6.95%	6.68%	-0.27%
Null sec	76999	86487	11.07%	11.26%	0.19%
Wormhole Space	16846	18812	2.42%	2.45%	0.03%

Table 3: Population of each of the security level groups at the end of Q3 2010 compared to Q4 2010. Null security has seen a continued rise in population quarter on quarter since the release of the Dominion expansion.

Once again, this quarter saw a relative increase in the proportion of users in null security space, as well as high security and wormhole space. This was at the expense of low security space, which saw a 0.27% decline in its share of the overall population. A year ago, the population of null security was 9.73% of the total and has since grown to 11.26%, a significant increase of 1.53% points.

System	Characters Q3 2010	Characters Q4 2010	% Change	Rank Change
Jita	33501	37431	11.73%	-
Amarr	7856	8806	12.09%	-
Rens	7856	8612	9.62%	-
Dodixie	5865	6921	18.01%	-
Arnon	3417	3878	13.49%	+1
Motsu	3482	3824	9.82%	-1
Hek	3397	3722	9.57%	-
Oursulaert	2987	3159	5.76%	-
Akiainavas	2576	2947	14.40%	-
Couster	2316	2680	15.72%	-
Total in Top 10:	**73,253**	**81,980**	**11.91%**	
Total in All:	**467,190**	**516,650**	**10.59%**	
% in Top 10 Systems:	**15.68%**	**15.87%**	**1.20%**	

Table 4: The 10 highest-population systems as of the end of Q4 2010 compared to Q3. These numbers do not count characters that have either a rookie ship or a capsule as their active ship.

Jita and Amarr have continued to grow at a faster rate than the total population, with Amarr growing to become a more populated hub than Rens, which has continued to decline in population relative to the total.

At the time of the snapshot, 7.24% of all characters not located in a rookie ship or capsule were located within the Jita solar system, with the total head count higher than in the next six most populous systems combined. On most days, the online population at a single time within Jita exceeds 1,500, with a peak last year in excess of 2,000 characters.

Overall, 2010 has seen a trend of players moving toward either null security/wormhole space or toward the main empire hubs, the "cities" of EVE. One of the more notable things has been Amarr surpassing Rens to become the second most populous solar system in EVE, through either gaining more each quarter or (as it did in two quarters) losing less than its Minmatar competitor. The urbanization of EVE hence continues, where people gravitate toward the most active commercial centers. This is an interesting parallel to the development of population distribution on Earth.

SHIP TYPES IN USE

This section shows what types of ship were being flown at the end of the last quarter. The data is taken from a single snapshot of the Tranquility database at the end of Q4.

With the initial phases of the Incursion expansion being deployed and the usual increase in activity historically seen over the winter months, the number of characters on active accounts at the time of this quarter's snapshot increased from 695,256 to 768,945.

For the first time, we saw a Tech III ship enter the top ten, with the number of characters piloting strategic cruisers increasing by 32.09% to 12,110. This is a substantial increase, up from 7,355 just two quarters ago.

	Ship Type	No. of Ships	% of Total	Change
1	Hulk	19,046	2.48%	-
2	Drake	18,927	2.46%	-
3	Kestrel	11,817	1.54%	-
4	Rifter	11,554	1.50%	-
5	Echelon	9,115	1.19%	New
6	Noctis	8,864	1.15%	New
7	Bestower	8,644	1.12%	-2
8	Badger Mark II	8,195	1.07%	-1
9	Tengu	7,616	0.99%	11
10	Retriever	7,514	0.98%	-4
	Rookie ships, shuttles and capsules	309,195		
	Other	348,458		
	Total	**768,945**		

Table 5: The ten most flown ships at the end of Q4 2010. Rookie ships, shuttles and capsules were removed from the list and grouped separately. The Echelon was a free promotional ship from CONCORD given out over the festive period.

The introduction of a dedicated salvage ship, the Noctis, has proven to be extremely popular. The ship has already risen to 6th place despite only having been introduced on November 30, with 8,864 characters piloting them and 56,699 having been produced. This ship has evidently been viewed as a replacement to the destroyer for salvaging purposes, resulting in the most favored salvaging destroyer, the Catalyst, falling from 8th position last quarter to 17th.

The Drake, while still in second position, has increased its share of total active ships flown, from 2.39% to 2.46%. It could be predicted that, unless balancing changes affect this ship or create a new favorite, the Drake may overtake the Hulk as the most flown ship before the end of Q1 2011.

The fall of the Retriever to tenth place is also an interesting development. At the end of the first quarter of 2010, the Retriever made up 1.47% of ships flown. Just nine months later, at the end of Q4, this has fallen to 0.98%. This and the slight rise in Hulk pilots can be speculatively associated with the removal of the learning skills, which resulted in most players gaining a significant pool of skill points to be freely allocated wherever desired. This would have allowed players to almost instantly gain the skills required to upgrade to the more efficient Hulk.

For the fifth quarter in a row, electronic attack ships were the least flown ship group. The growth in the number of titans being flown had led to them surpassing the number of black ops, with 472 titans and 449 black ops being piloted.

	Ship Type	Q3, 2010	Q4, 2010	Growth
1	Supercarrier	1,349	1,782	32.10%
2	Strategic Cruiser	9,168	12,110	32.09%
3	Industrial	50,676	60,173	18.74%
4	Logistics	2,009	2,383	18.62%
5	Frigate	103,296	121,585	17.71%

Table 6: The top five ship groups in terms of percentage growth between Q3 and Q4 2010. These numbers are based on snapshots taken at the end of each quarter. Supercarriers have now seen substantial growth each quarter for a full year.

The growth in industrials has mostly been spurred on by the introduction of the Noctis at the end of November, though there has been some additional growth in other industrials being flown. Frigates, the standard ship group that almost all players progress to from their rookie frigates, saw significant growth this quarter also. This is in line with a significant influx of new users and general growth in active accounts due to returning users.

The strategic cruiser's popularity growth shows no signs of slowing. The ship group has seen substantial quarter-on-quarter growth since its introduction in Apocrypha. Of the strategic cruisers, 7,616 of them were Tengu class, with just 1,577 Legions, 1,531 Lokis and 1,368 Protei being flown, a clear display of preference for a shield-and-missile-based ship that has been seen by many as a PvE replacement for the Raven.

SUPERCAPITAL PROLIFERATION

The number of supercapital ships has been a subject of controversy since their introduction over five years ago in the Red Moon Rising expansion of December 2005. In this section we will shed some light on their current numbers and their activity throughout 2010.

Group	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Q4 2010	2010 Gain	%
Supercarrier	550	650	963	1349	1782	1232	224.00%
Titan	332	351	364	417	472	140	42.17%

Table 7: This table shows the number of supercapitals being piloted by characters on active accounts through snapshots taken at the end of each of last year's quarters, with the addition of Q4 2009. At the end of 2010 there were 1,232 more supercarriers being flown than at the end of 2009. There were also 213 supercarriers and 37 titans on disabled accounts at the end of Q4 2010.

An overview of the number of supercapitals destroyed until the end of Q3 2010 can be found on page 38 of QEN Q3 2010. Overall, since their introduction, there are existing records of 292 supercarriers (formerly motherships) and 80 titans being destroyed, with over half of those – 155 supercarriers and 45 titans – being destroyed in 2010.

During Q4 2010 595 supercarriers and 94 titans were produced. Extensive information on the production of supercapitals prior to Q4 2010 can also be found in the last QEN. The production of each type this quarter was in line with the proportion currently in existence of each ship type, indicating no shift in the racial variants of supercapitals preferred by pilots.

Supercarrier		Titan	
Aeon	129	Avatar	33
Hel	18	Erebus	35
Nyx	367	Leviathan	14
Wyvern	81	Ragnarok	12
	595		**94**

Table 8: Supercapital ships produced during Q4, 2010. The production levels of the Nyx outstripped that of all other supercarriers combined.

There are signs of significant preference for certain types within each group of supercapital. The Erebus and Avatar are heavily favored among the titans, likely due to their focus on armor tanking with direct damage through turrets. The Leviathan uses missiles with shield-based tanking and the Ragnarok lacks tanking ability compared to the other four.

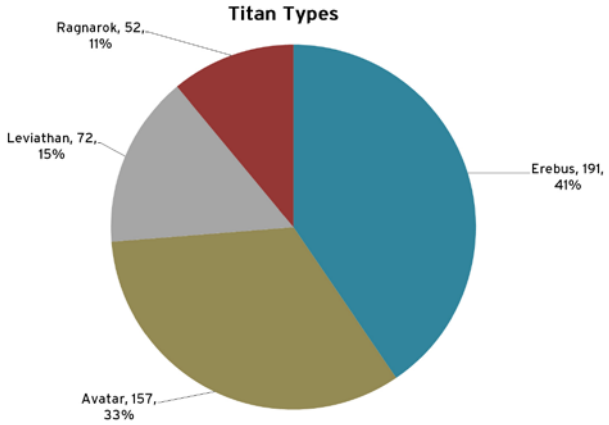


Figure 2: The types of titans being flown on active accounts at the end of Q4 2010. The Avatar and Erebus are both capable of taking colossal amounts of damage and use turret-based weapon systems. This combination is generally favored over missiles and shield tanking at the capital level.

Within the supercarrier class the Nyx is overwhelmingly the most popular, making up in excess of half of the total number of supercarriers (58%). Considering the primary role of the supercarrier is to inflict damage, the bonus received by the Nyx to fighter and fighter bomber damage is clearly seen as preferential. The other classes receive either tanking bonuses (as with the Aeon and Wyvern), or a logistics bonus (like the Hel). The aesthetics of the Nyx are also often cited as a preference by many.

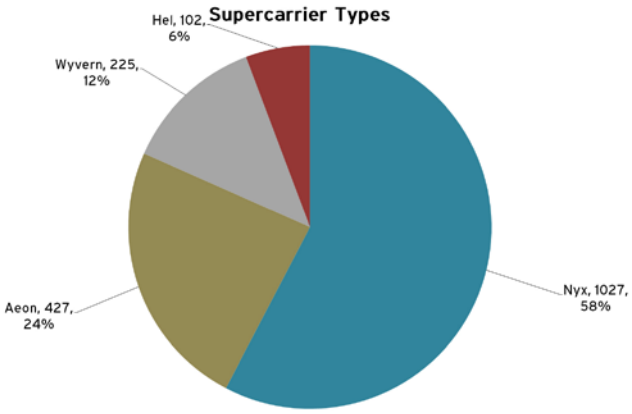


Figure 3: This figure shows the types of supercarrier being flown at the end of Q4 2010. The Nyx is heavily favored, likely due to its bonus to fighter and fighter bomber damage.

Supercapitals must be built at starbases due to their size, resulting in vulnerability during the construction process; if the capital ship assembly array is destroyed while the ship is in production, the supercapital is lost before it has even been launched. This is a regular topic of discussion in inter-alliance conflicts. So far there have been 45 such events, in which 10 titans and 35 supercarriers have been destroyed, the first being a Titan in the Tenerifis region on February 16, 2007.

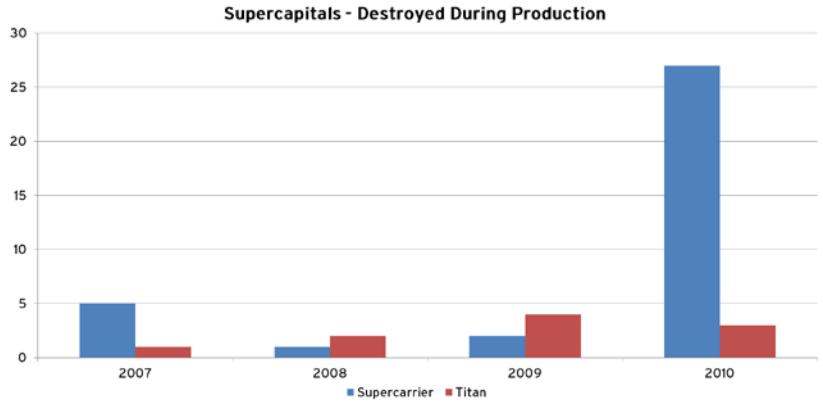


Figure 4: Supercapital ships destroyed whilst in production. The removal of capital system starbase invulnerability with the Dominion expansion, in combination with an increased rate of supercapital production, has led to an increase in the number of supercapitals destroyed during the construction process.

In the Revelations II expansion of June 2007, a new sovereignty system was put in place where if a system within a particular constellation met certain requirements, it could be designated as the capital system of that constellation. This would in time cause that system to gain a vital bonus: starbase invulnerability. As long as that system kept its status as the capital, the starbases within it would be impervious to attack. This added a vital security blanket for supercapital production, allowing construction with little chance of the job being interrupted by an attack. With a new revision of sovereignty mechanics in the Dominion expansion of December 2009, this was removed. The impact this has had is clear: out of the 45 supercapital construction deaths that have taken place in EVE, 30 have occurred since Dominion.

THE MONETARY SYSTEM

In Q4, 2010, EVE's subscriber count grew by 9%, which translated into an increase in money supply. The money supply rose by 11% in Q4 2010 and there is now a combined 445 trillion ISK on all accounts within EVE. That represents the sum total of ISK in the game, on both active and inactive accounts. To get a better understanding of the current money supply, we also calculate the total money supply of players currently playing EVE, omitting lapsed subscriptions. Approximately 258 trillion ISK are on active paying accounts and 33 trillion on player corporation accounts, increasing the total on active paying accounts and player corporation accounts by around 35 trillion in the quarter.

In this segment we will focus on transactions between NPCs and players. The main cause for the increase in money supply is that the bounty prizes increased by 8.1 trillion ISK in Q4 compared to Q3, or from 67.6 trillion to 75.7 trillion. In addition players have increasingly been selling items to NPCs such as insignias, overseer´s personal effects and sleeper loot, as well as other commodities such as tobacco and garbage. In Q4 around 19 trillion ISK flowed into EVE from NPCs buying the aforementioned commodities. The agent mission rewards increased by 3.7%, up to 5.7 trillion, in Q4.

To counter this there are sinks that cause money to flow out of EVE, such as players paying taxes and buying goods and services from NPCs. The top 3 sinks increased as well in Q4, with the LP store, blueprints and skills being the largest of all. The skills sink increased by 34% in Q4 alone. That increase was mainly due to the learning skills being removed in December. The removal of the learning skills resulted in players buying more skill books. For example, players spent 820 billion more ISK on the Capital Ships skill than in the previous month, accounting for 14% of the total skill sink in Q4. The increase in the blueprint sink in November was mainly due to the launch of the Noctis in late November.

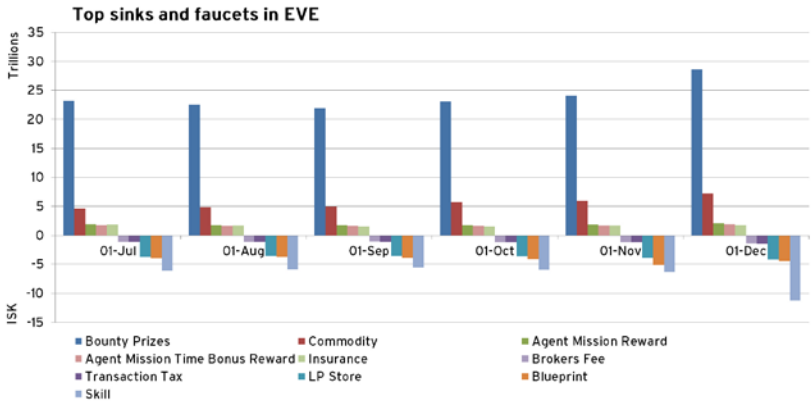


Figure 5: The above graph shows the development of the largest sinks and faucets during the past 6 months. Over the past months we have seen a large increase in bounty prizes and commodities while the mission rewards have remained stable around 2 trillion per month. The LP store sink increased by 8% in Q4 compared to Q3, while the trade value of blueprints sold to players increased by 16%. The skill sink remains the largest sink in EVE and even increased by 34% in the quarter, mainly due to the learning skills' removal in December.

The blueprint sink is currently the second largest sink in EVE. Out of the top 5 blueprint sinks, 3 of them are capital ship-related. The largest sink item is the blueprint for the Nyx capital ship, sinking over 2.6 trillion in Q4 or around 19% of the total blueprint sink. In 3rd and 4th place are the Aeon blueprint and the capital ship maintenance bay, respectively, while 2nd place belongs to the Noctis, a new industrial ship that became available to players with the Incursion expansion on November 30. On the first day of its availability, 3,961 Noctis blueprints were sold, sinking 1.5 trillion ISK and indicating without a doubt that players were very eager to produce the new ship. The Avatar is the most expensive blueprint in EVE; in Q4 2010, 5 such blueprints were sold, sinking a total of 337.5 billion ISK.

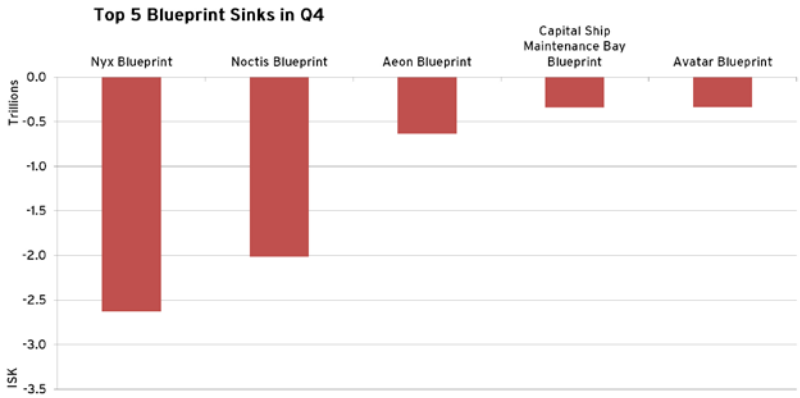
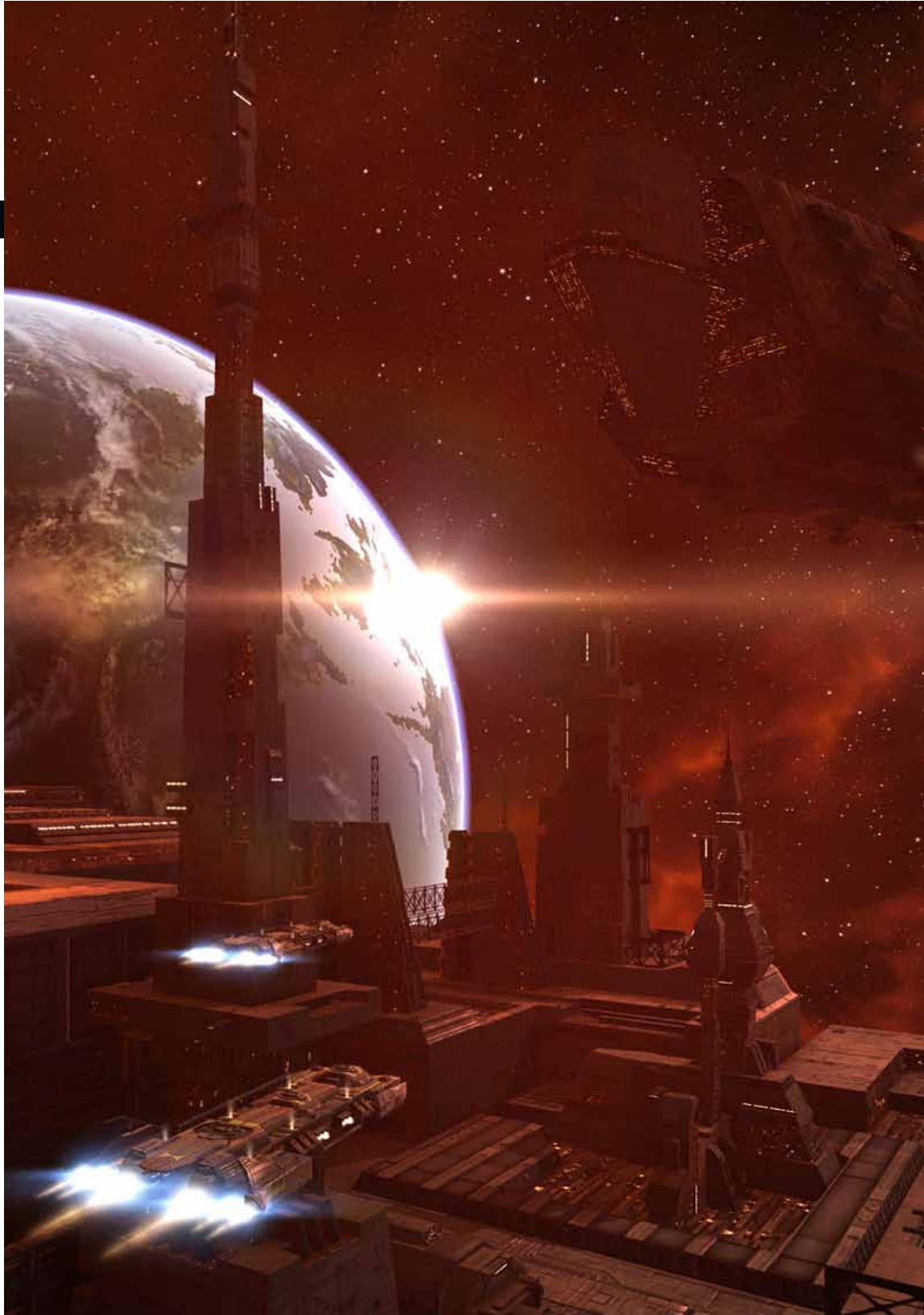


Figure 6: The above graph shows the largest blueprint sinks in Q4. The top 5 sink blueprints in Q4 accounted for 44% of the total blueprint sink, with the Nyx blueprint sinking over 2.6 trillion in the quarter. The new ship, Noctis, is the only industrial ship in the top 5 list, having sunk 2 trillion ISK in just over a month. The capital ship maintenance bay blueprint's total trade value in Q4 was 341 billion ISK, topping the 338 billions' worth of the Avatar blueprint sold.

EVE Central Bank has been monitoring the money supply closely and is becoming increasingly concerned about the rate of growth in the total money supply and the subsequent risk of inflation increase (see next section). The bank has therefore proposed that in 2011 there should be a focus on increasing ISK sinks in order to curb potential inflation.



PRICE LEVEL CHANGES

All price indices for EVE are calculated as Laspeyres indices, in which the base is updated monthly, based on total trade value of individual items in the previous month. Within each index there is a variety of items, ranging from eight items for the Mineral Price Index to over 4,000 for the Consumer Price Index.

MINERAL PRICE INDEX (MPI)

The Mineral Price Index (MPI) shows the price changes in all eight minerals used to produce ships and other items in EVE. The weight of each mineral in the index changes each month is based on the relative trade values of the previous month. Table 8 shows the mineral basket, both for September and December.

	Weight in Index	
	Sep	**Dec**
Tritanium	28.9%	25.9%
Mexallon	23.6%	21.1%
Nocxium	5.4%	11. 7%
Megacyte	10.0%	11.5%
Zydrine	11.5%	10.2%
Pyerite	10.4%	8.6%
Isogen	8.4%	8.5%
Morphite	1.9%	2.5%

Table 9: The weights of the minerals in the Mineral Price Index are recalculated every month. The weight of Nocxium has more than doubled over the quarter.

The MPI rose by 12.9% in Q4 and is currently at a similar level to what it was before the changes to the insurance system in May, which significantly lowered the prices of minerals. Nocxium is by far the biggest contributor to this inflation in mineral prices.

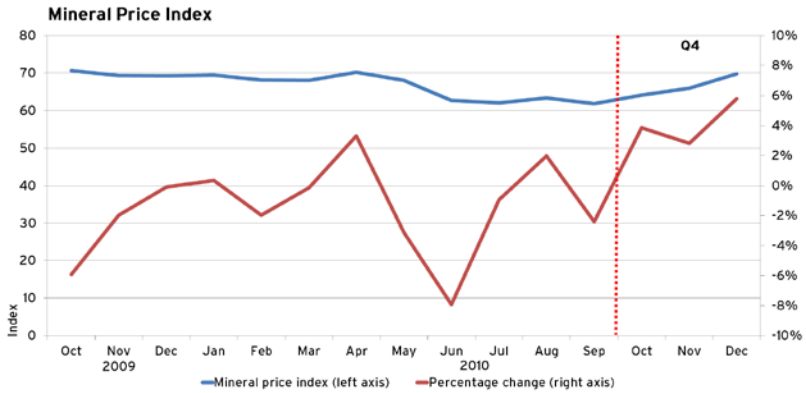


Figure 5: Mineral prices inflated in the quarter through a combination of increased demand and reduced supply of some minerals.

We split minerals into two categories: low-end minerals and high-end minerals. The low-end minerals contain Tritanium, Pyerite, Mexallon and Isogen, while the high-end category includes Nocxium, Zydrine, Megacyte and Morphite.

LOW-END MINERALS

Trade in low-end minerals was rather slow at the beginning of the quarter, with traded volume generally falling in the first two months, which was in line with falling production of Tech I ships. This quickly changed in December – or rather, on November 30 – when ORE introduced the Noctis blueprint.

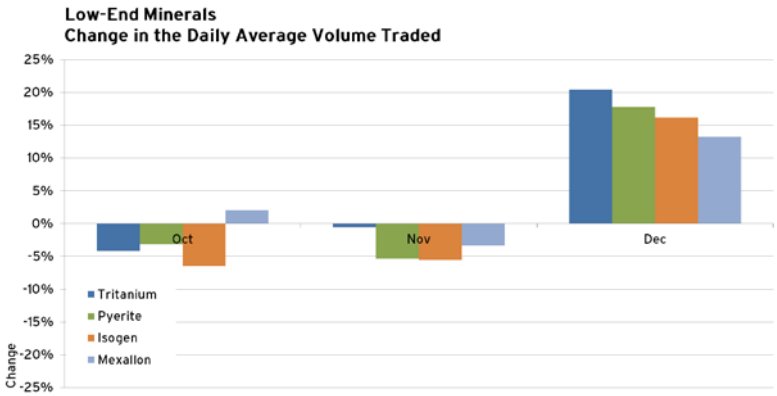


Figure 6: Traded volume of low-end minerals took a jump in December due to heavy manufacturing of the Noctis.

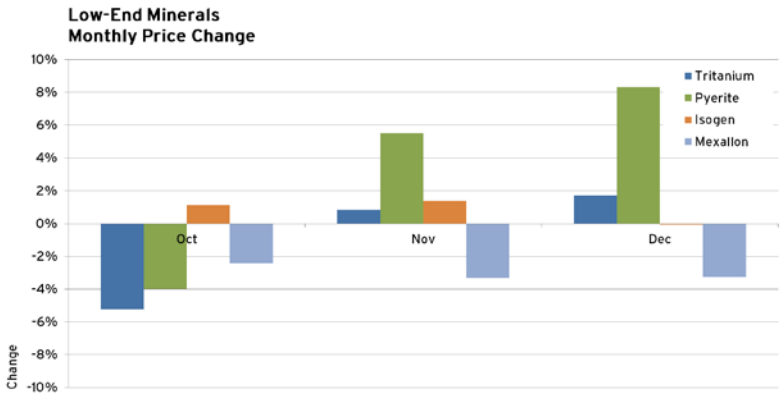


Figure 7: The quarter started with a general decline in the prices of low-end minerals. Noctis production raised Pyerite prices at the end of the quarter.

Pilot interest in the Noctis was immediate and substantial. On November 30, in half a day, 2,187 ships had been manufactured of that type. In December, an additional 54,509 such ships were made. This requires some serious quantities of minerals. The low-end minerals needed for Q4 production of the ship were 3 million units of Isogen, 17 million units of Mexallon, 58 million units of Pyerite and 209 million units of Tritanium. To put this in context, 16% of the total quantity of Pyerite, Mexallon and Isogen used for ship production in the month of December went toward production of the Noctis. The ratio was 14% for Tritanium.

The quantity of low-end minerals used in ship production grew from 21 to 25 percent from November to December. Traded volume grew a bit less, or from 10 to 17 percent. This translated into fairly modest price changes for low-end minerals, with Pyerite being the only significant exception. This suggests that the Pyerite supply has not kept up with increasing demand as well as the other low-end minerals, something which may result in increased Pyerite prices in the future.

HIGH-END MINERALS

The high-end minerals were even more affected by the massive Noctis production at the end of the quarter. No mineral was more affected than Nocxium, but Megacyte also showed the symptoms of increased demand.

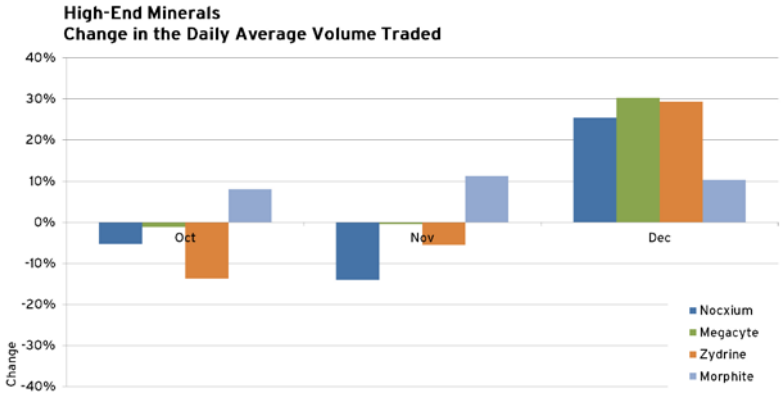


Figure 8: Traded volume of all high-end minerals rose considerably in December, following the introduction of the Noctis; especially the three high-end minerals used in Tech I production. Nocxium volume grew a little less than Zydrine and Megacyte due to its scarcity on the market.

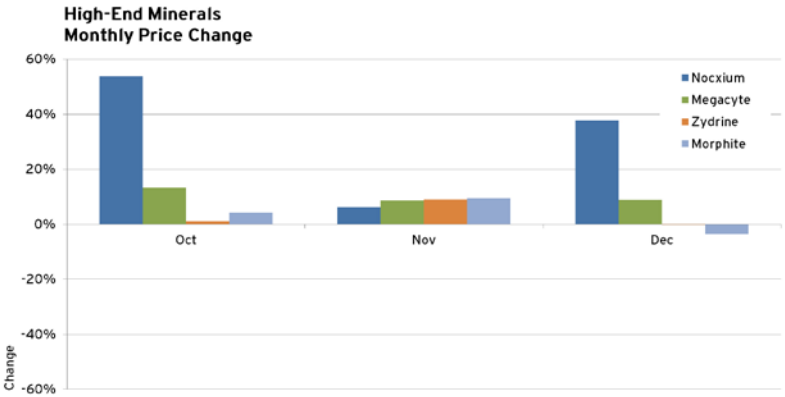


Figure 9: The quarter was mainly characterized by the continued spiraling of Nocxium prices, originally due to reduced supply from drone compounds. The effect was amplified by the large-scale production of the Noctis.

Quantities used for ship production were quite stable in the first two months of the quarter, while changes in trade volume were slightly larger.

Nocxium prices had started to rise greatly at the end of Q3, due to reduced supply following June changes to drone compounds, which are an important source of minerals. This price trend continued at an even greater pace in the beginning of Q4, but started to stabilize in November. The arrival of the Noctis on the market then sent Nocxium prices spiraling again, as Nocxium is a bottleneck in the mineral supply. Furthermore, the Noctis requires a greater proportion of Nocxium than most other ships, which increased demand even more. As a result of this, the total amount of Nocxium used in ship production grew by almost 40% from November to December. So large is the influence of the Noctis that it consumed a full quarter of all the Nocxium used in ship manufacturing in December! Somewhat inflexible supply meant that the price went up by 38% in December. Since March 2010, the price has gone up by 463%.

Megacyte price rose as well, albeit much less than that of Nocxium, due to supply being somewhat more flexible. The price rose by 34% in the quarter, of which 8.9% came in December.

PRIMARY PRODUCER PRICE INDEX (PPPI)

The Primary Producer Price Index consists of manufacturing items used for the production of other manufacturing items at the secondary stage. Manufacturing items used for the production of final consumer goods are excluded. The index includes such item groups as drone compounds, moon materials, planetary commodities and items used in invention.

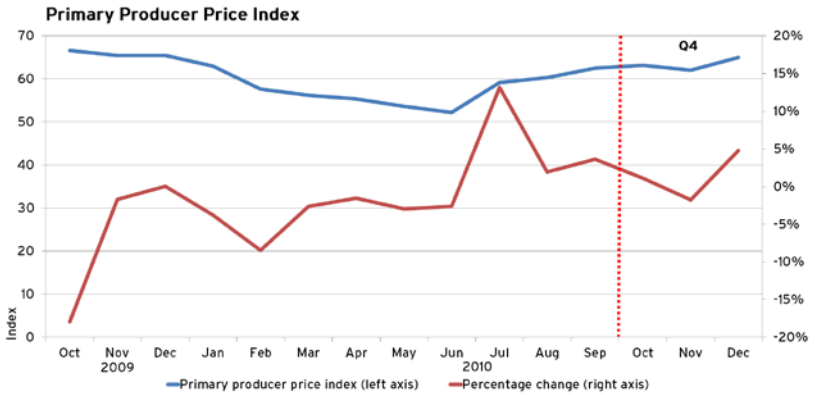


Figure 10: Q4 saw inflation in the PPPI, largely driven by moon materials. The cost of moon mining has been rising due to increased fuel prices and this is probably affecting moon material prices.

PRICE LEVEL CHANGES

The quarter saw both inflation and deflation among the various item categories, but the overall trend was that of inflation. The index rose by 4.1% over the quarter, despite a 1.8% decline in November.

Yet again, moon materials are the biggest driver. Advanced moon material prices have generally been rising since June. However, the overall trend for advanced moon materials was that of deflation from Dominion to Tyrannis. The reversal of inflation following Tyrannis and Planetary Interaction may be linked to the fact that the part of starbase fuel that had previously been supplied by NPCs became player-made through Planetary Interaction. From May to December, the price of this fuel group jumped by a whopping 552 percent. Since moon mining is conducted through starbases, this affects their production cost. This increased cost then gets passed on to the price of the product.

The price of planetary commodities had stabilized quite a bit after the initial price flux that followed the introduction of PI. However, in December, the price of planetary specialized commodities category increased by 56 percent, just about all of it being driven by Planetary Vehicles. The only use of these vehicles is in the production of Integrity Response Drones. These should see increased demand in the following months, due to CONCORD opening loyalty point stores to reward those that fight the Sansha incursions. A large part of the capital module blueprint copies offered by the store require Planetary Vehicles as a component. This has not gone unnoticed by the ever watchful entrepreneurs of New Eden, and the result is a vastly increased price.

SECONDARY PRODUCER PRICE INDEX (SPPI)

The Secondary Producer Price Index contains production materials and other production items that are used in the manufacturing of consumer goods, i.e. goods included in the Consumer Price Index.

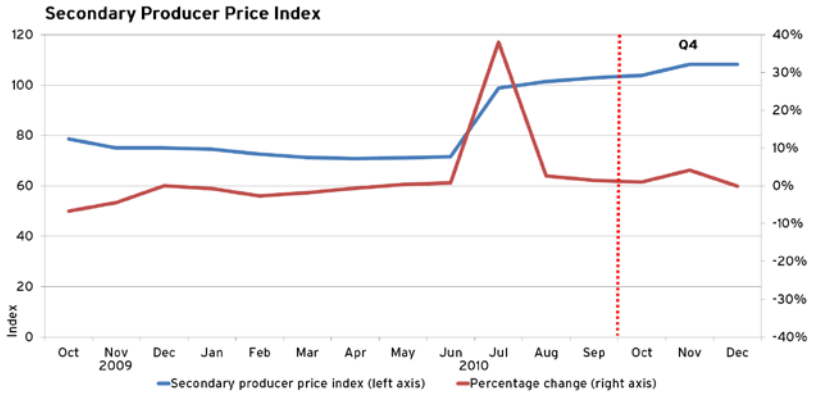


Figure 11: Price development of the Secondary Producer Price Index in Q4 was mainly influenced by salvage prices and speculative trading of planetary commodities in anticipation of Incursion.

The index rose by 5.2% over the quarter. It started off slowly, with little happening in October. November witnessed a 4.2% increase in the SPPI, which turned into a minor deflation in December. The inflation in November was mainly caused by increasing salvage prices, but aided by rapidly rising prices on planetary products. Planetary products continued trending upwards in December, but were outweighed by falling salvage prices.

The growing prices on planetary products in November and December were probably caused by speculative trading in anticipation of two changes brought by the Incursion expansion. One is the previously mentioned CONCORD loyalty point store, offering blueprint copies for capital sized modules which require advanced planetary commodities. The other is the change to Planetary Interaction mechanics, which was originally announced with sparse details.

Salvage prices have been generally trending upwards since last summer. This may be related to a Tyrannis-introduced reduction in meta level 0 loot drops from mission NPCs that may have reduced players' willingness to loot after missions and thus may have reduced salvaging as well. This changed suddenly with the introduction of the Noctis on November 30. A specialized salvaging vessel with capabilities that vastly outperform any other salvage fitted ships, the Noctis was built in massive numbers. With up to 80km range on tractor beams, up to 4 times the traction speed, and 25% shorter cycle times on both salvagers and tractor beams, the ship has made salvaging and looting much faster than it had ever been. We can therefore expect to see a significant reduction in the prices of salvage and rigs in the coming months.

CONSUMER PRICE INDEX (CPI)

The Consumer Price Index measures the overall price changes of consumer products. This is not limited to consumables such as fuel, ammunition or PLEXes, but also includes assets such as ships, modules, implants and starbase structures. In summary, anything that is not primarily used to produce other goods is included in the index, which contains over 4000 individual items.

Figure 12: The CPI inflation was mainly governed by rising PLEX prices in October and November but a sudden boost to demand in December caused a general inflation across most categories, funded through a large increase in PLEX creation.

The CPI rose by 4.7% in Q4, fairly evenly distributed over the quarter. The October inflation was almost solely driven by a 6% increase in PLEX prices, while the price levels of most other groups remained quite stable. PLEX prices continued to grow in November, with PI-supplied starbase fuel and rigs rising in price as well. PLEX prices have been on the rise since last summer due to steadily increasing demand. The same holds true for the part of starbase fuel that is made through Planetary Interaction, which has risen massively in price since players took over its production from NPCs last June. The increasing rig prices follow the increasing prices of salvage, which seems to be in shorter supply due to less salvaging in the wake of reduced meta level 0 loot drops.

Things took a different turn in December. On December 14, the dreaded learning skills were removed, which involved refunding the skill points already used to train them. This brought in a considerable number of older players that had stopped playing. Frequently, these players found themselves in need of cash to quickly reestablish themselves, so many of them chose to create

PLEXes and sell them on the market. Average daily PLEX creation grew by 18% from November to December. This increase in supply outpaced the growing demand for them, which resulted in a 3.4% reduction in price. In turn, this increased spending on other items, which inflated their price. Therefore, most other product categories saw inflation this month, including all tech levels, with the main exceptions being ice fuel and rigs. The small reduction in rig prices is only the beginning, caused by popularity of the newly introduced Noctis, which is bound to increase the supply of salvage through its superior performance. The falling price of ice fuel is most likely caused by the spiraling prices of PI-made starbase fuel. As mentioned, PI-made starbase fuel has risen in price by 552% since May. This increases the cost of starbase operation, which is likely to cause a reduction in the number of active starbases. This, in turn, should reduce demand for ice fuel, which has fallen in price by 27% since May.

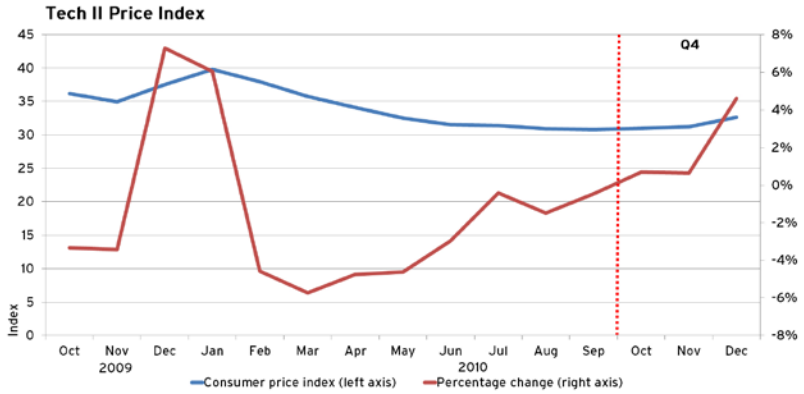


Figure 13: For most of the quarter, Tech II prices were stable. Increased demand in December pushed prices upwards.

Tech II prices were quite stable in the first two months of the quarter, rising by only 0.7% each month. As previously mentioned, the return of experienced players in December caused a spike in demand, which resulted in a 4.6% increase in the prices of Tech II ships and modules.

Total produced mass of Tech II ships grew by 12.8% in December and reached 1.3 gigatons. This was, however, a reversal of a downward trend since August. From Q3 to Q4, Tech II ship production fell by 11%, from 4.1 gigatons to 3.6 gigatons.

PRICE LEVEL CHANGES

SUMMARY

This quarter was characterized by a boost in demand in December due to increased activity, including the return of experienced players as well as the reimbursement of learning skill points. The introduction of the Noctis had a significant effect on the market, raising mineral prices considerably, especially for Nocxium. The Noctis has already started affecting the price of salvage and rigs and will no doubt continue to do so. Starbase fuel, provided through Planetary Interaction, kept on rising and seems to be reducing the number of starbases in operation, which is lowering demand for ice fuel but pushing moon material prices upwards. Finally, speculation regarding the new CONCORD loyalty point store and changes to Planetary Interaction affected the price of planetary products. With Incarna being launched this year we do expect demand to increase in 2011 with the risk of increased inflation. If that does happen countermeasures would have to be taken in the form of increased sinks, reduced faucets or even higher taxes in the system.

Manufacturing is an essential profession in New Eden. It provides the majority of final goods, although it's not the only source of all such goods. Some goods are also provided by NPCs, either through their violent demise or through trade. Over time, NPCs have provided fewer and fewer goods, which has increased the importance of manufacturing even further. This chapter only focuses on traditional manufacturing in stations and does not touch on production through Planetary Interaction. That will be covered at a later time.

Comparing and aggregating the production of such different items as rockets and titans presents some difficulties. Therefore, we have often opted to use the mass of manufactured ships as an indicator of the quantity of production. This clearly has its flaws, but so do all other possible indicators

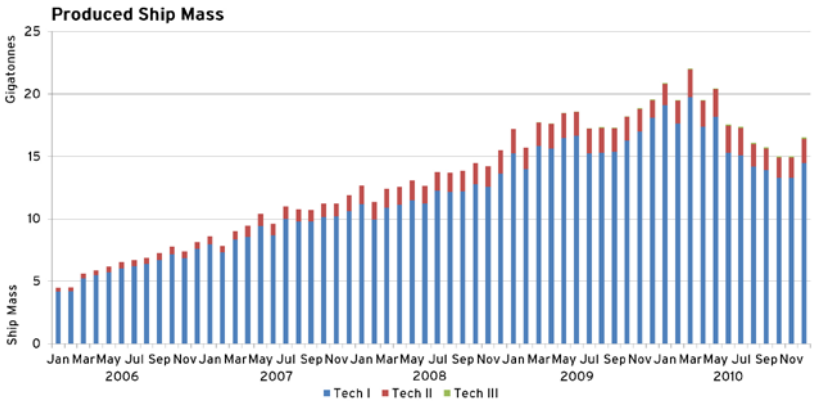


Figure 14: Production of ships has increased steadily over the years, with the notable exception of the summer of 2010. This trend is mainly influenced by the growing number of players in the New Eden economy.

Figure 14 shows the development of produced ship mass from 2006 to the present. The manufacturing trend is obviously highly affected by changes in the number of players, which has changed drastically over the same period.

Normalizing the data with the subscriber count yields figure 15, which thus shows the average ship mass produced per each player. This has been quite stable over the years but takes a noticeable dive in June 2010. What can reduce the ship demand per player to this extent in such a short period of time? The insurance changes were introduced on May 26, in which insurance payout was linked to the production cost of ships instead of being fixed. This made it much less feasible to build ships

for the purpose of self-destructing them for the insurance payout, and thus ship demand took a considerable hit.

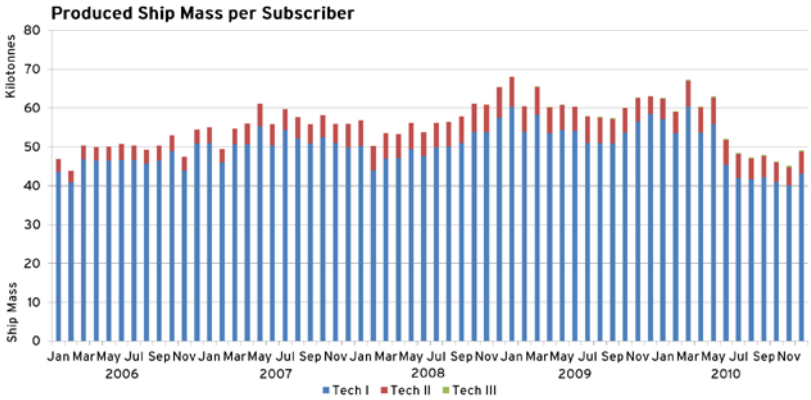


Figure 15: Produced ship mass per player has remained quite stable over the years. The sudden fall, in the summer of 2010, is the result of changes to insurance payouts which caused reduced demand.

Figure 15 does attempt to show the relative shares of each tech level. However, you'll probably need extraordinary sight or an optical instrument to spot Tech III in the graph. Therefore, we have provided table 10 to show the yearly detail.

Year	Tech I	Tech II	Tech III
2006	92.7%	7.3%	0.0%
2007	91.0%	9.0%	0.0%
2008	88.2%	11.8%	0.0%
2009	89.4%	10.5%	0.2%
2010	88.8%	10.7%	0.5%

Table 10: Tech I ships still make up the biggest share of ships produced by far. That is unlikely to change in the foreseeable future.

Tech I ships lost a little of their share to Tech II ships from 2006 to 2008. Apart from that, changes have been mild, even with the introduction of Tech III ships in 2009.

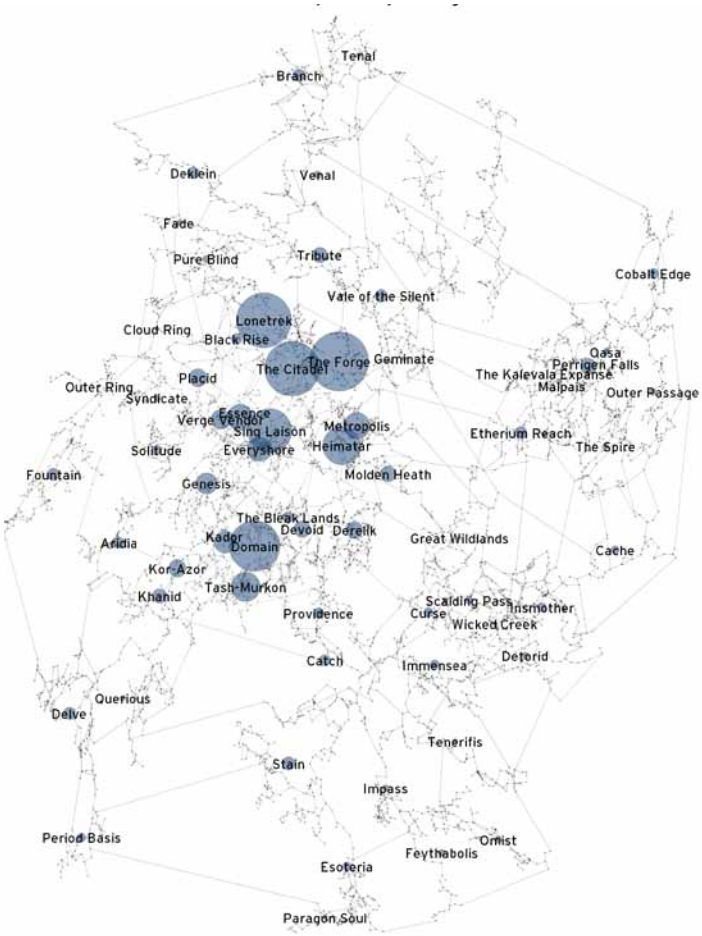


Figure 16: Produced ship mass in total, year 2010. The weight of manufacturing lies within the empires.

Unsurprisingly, the bulk of the production takes place in empire space. The largest share of it is being done in Caldari space, as was to be expected. Caldari production is fairly evenly distributed between the 3 major Caldari regions, with The Forge producing 16% more ship mass than either Lonetrek or The Citadel. The regional differences within the other empires are vastly greater. The Heimatar region of the Minmatar Republic produces more than twice the mass produced in the second most productive Minmatar region, Metropolis. Within the Gallente Federation, 181% more ship mass is produced in Sinq Laison than in Essence. The most uneven distribution is among the regions of the Amarr Empire, where industrialists in Domain produce more than three times what is produced in Tash-Murkon, the second most industrious Amarr region.

The distribution of produced ship mass between the four empires is shown in figure 17. The Caldari are clearly the industrial powerhouse of New Eden, producing 44% of ship mass in empire space and 38% of the total for New Eden. Locating manufacturing operations close to Jita makes sense.

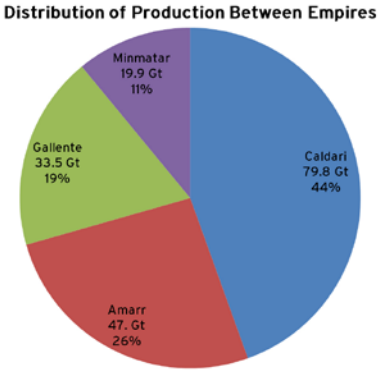


Figure 17: Produced ship mass within the four empires. Not only does the Caldari State dominate trade through Jita, but also manufacturing.

Empire space includes both high security space and low security space. Figure 18 shows manufacturing activity divided by solar system security type.

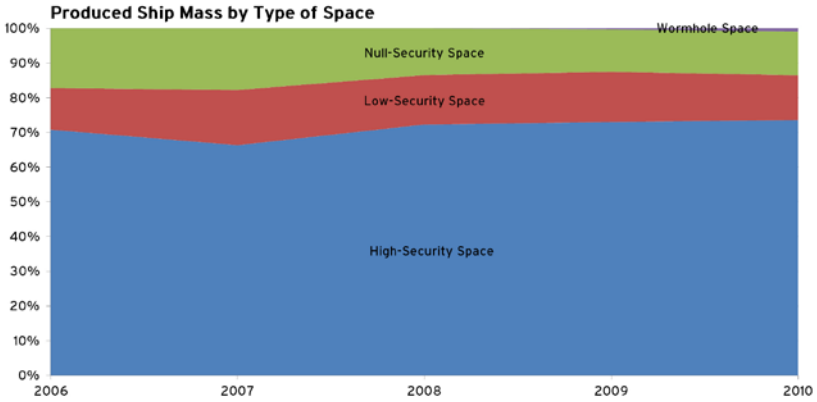


Figure 18: The majority of manufacturing takes place in high security space. The share has been rising a little over the last three years.

The interesting part here is that manufacturing has been moving away from low security space and null security space since 2007. In 2010, 73.6% of ship mass was produced in high security space, having risen from 66.3% in 2007. Null security space accounted for 12.6% of ship production in 2010, while 12.9% came from low security space. Though nearly undetectable on the graph, 0.9% of ship production took place in wormhole space.

The 10 solar systems most active in ship production are listed in table 11. The top system is Safizon, located three jumps from the trade hub of Amarr. All but one are 3 jumps or less from the major trade hubs of Jita, Amarr or Rens. The odd one out is Pakkonen in Lonetrek, not because it's 4 jumps from Jita, but because it's a low security system.

Solar System	Mass Produced	Region
Safizon	3.2 Gt	Domain
Madirmilire	3.1 Gt	Domain
Itamo	3.1 Gt	The Forge
Amarr	2.6 Gt	Domain
Sobaseki	2.4 Gt	Lonetrek
Annaro	2.3 Gt	The Citadel
Muvolailen	2.3 Gt	The Citadel
Pakkonen	2.1 Gt	Lonetrek
Jita	2.0 Gt	The Forge
Onga	1.9 Gt	Heimatar

Table 11: Top 10 solar systems in terms of produced ship mass in 2010. All are close to the major market hubs, but one sticks out with a security status of 0.4.

The most produced items are shown in figure 19. Understandably, ammunition dominates the top list but the Scourge Heavy Missile sticks out, having had 137% more production runs than the second product behind it. 112 million production runs were carried out in 2010, which translates to 11.2 billion missiles. This is because of the exceptional popularity of the Drake, which has a damage bonus that only applies to kinetic missiles.

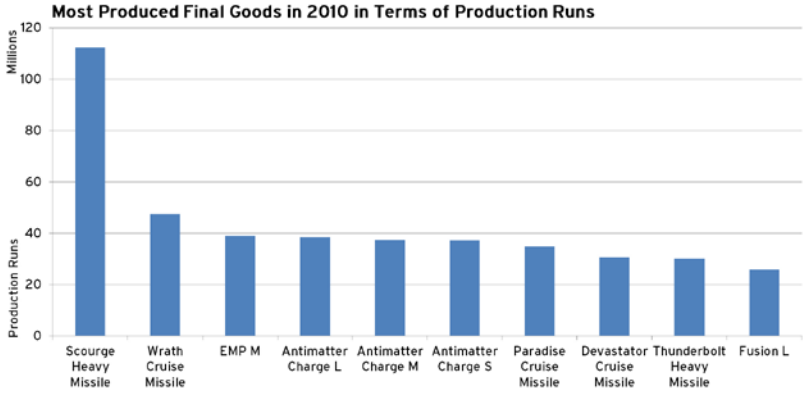


Figure 19: Top 10 final products in terms of production runs in 2010. The quantity of Scourge Heavy Missiles produced indicates the popularity of the Drake, which gets a bonus to kinetic missile damage.

Looking only at module production yields the following results.

Product Name	Total Runs	Traded Volume	%
425mm Railgun I	14,300,092	2,362,769	16.5%
Expanded Cargohold I	4,942,893	4,776,786	96.6%
800mm Repeating Artillery I	4,385,452	2,533,551	57.8%
Passive Targeter I	4,320,419	2,386,831	55.2%
Tachyon Beam Laser I	2,864,814	2,097,952	73.2%
Expanded Cargohold II	2,643,036	4,674,984	176.9%
1400mm Howitzer Artillery I	2,614,701	1,984,132	75.9%
Salvager I	2,473,029	3,202,039	129.5%
Damage Control I	2,467,523	1,747,666	70.8%
Cap Recharger I	2,016,037	1,533,234	76.1%

Table 12: The most produced modules. Many modules are commonly produced as a means of compressing minerals for transport.

The table shows signs of the release of the Noctis on November 30. The Salvager I is an especially common module on the Noctis, with Expanded Cargoholds I and II making a strong showing as well. The Salvager II requires level 5 of the Salvaging skill, which explains the popularity of the low-budget Salvager I on such a ship.

The top module on the list, the 425mm Railgun I, is not there because of its popularity in combat. Rather, the reason for the immense production volume of the gun lies in its use for mineral compression. Some modules often have considerably lower volume than the minerals they're made of. Therefore, large quantities of minerals are often transported by first producing modules from them and then recycling them at the destination. The 425mm Railgun I is clearly the most popular for this purpose, but it is far from being the only one. Some ammunition types are also popular for mineral compression, such as citadel torpedoes. The comparison to traded volume in the table is an attempt to highlight which modules are largely produced for mineral compression rather than for sale on the market. Of the modules in the table, the 800mm Repeating Artillery I and the Passive Targeter I are no doubt widely used in mineral compression.

Figure 20 illustrates the mineral compression role of the 425mm Railgun I. Based on data from November and December 2010, the blue bubbles show where the gun was manufactured, while the red bubbles represent the recycling of the guns. Larger bubbles mean more quantity. It's evident that the bulk of the production takes place within the borders of the Caldari State. The Forge, with its colossal trade hub Jita, is the main contributor, backed by heavy production in the two other industrial regions of the Caldari State. Interestingly, production of the gun in other empire regions

is barely noticeable. Production, in this case, is far less evenly distributed than that of ships, as seen in figure 16.

It should be stressed that figure 20 is far from painting a complete picture of mineral compression, since it's only illustrating the use of one product for a limited period of time. Regions of null security space that show little or no recycling on this chart may either be using different products for the compression, or may have had unusually little recycling activity in the two months used for this example.

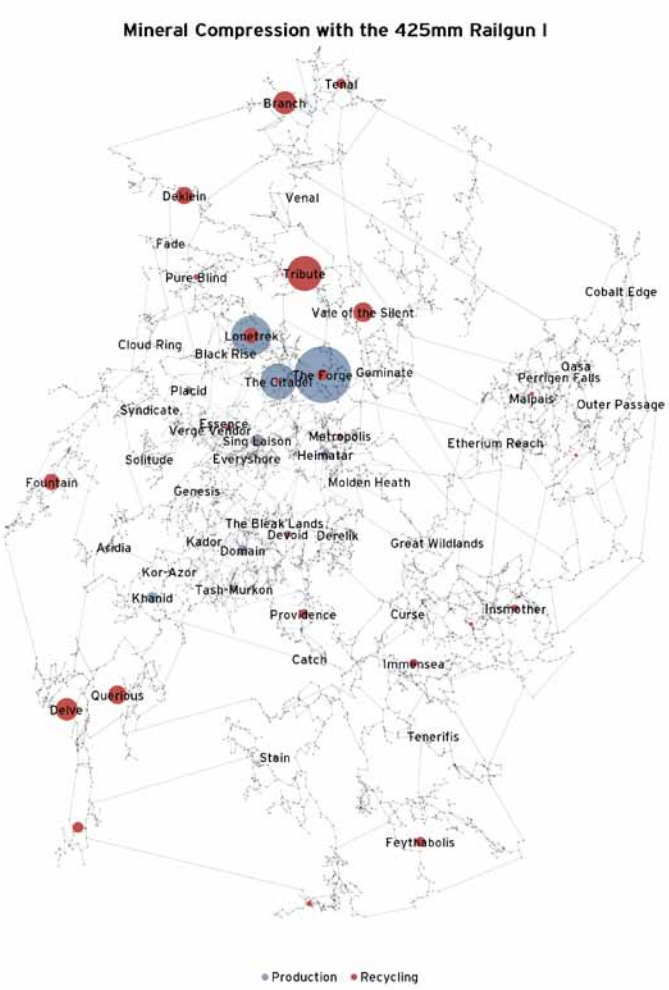


Figure 20: Compression illustrated through the production and recycling of the 425mm Railgun I. Production of the module mainly takes place in Caldari space, from where it is transported to null security space and recycled. This way the building materials require less freighter space. The figure is only based on data for November and December 2010.

Table 13 shows the blueprints most often bought from NPCs.

Blueprint	2009	2010	Change
Scourge Heavy Missile Blueprint	13,341	25,744	93.0%
Medium Cargohold Optimization I Blueprint	21,268	17,199	-19.1%
Antimatter Charge S Blueprint	13,404	17,180	28.2%
Caldari Shuttle Blueprint	11,108	15,718	41.5%
Gallente Shuttle Blueprint	11,474	15,285	33.2%
Antimatter Charge M Blueprint	10,561	14,805	40.2%
Thunderbolt Heavy Missile Blueprint	8,253	13,969	69.3%
Hobgoblin I Blueprint	8,283	13,946	68.4%
Medium Capacitor Control Circuit I Blueprint	19,132	13,921	-27.2%
Bloodclaw Light Missile Blueprint	8,836	12,765	44.5%

Table 13: The most commonly bought blueprints. Blueprints often used to produce for own use make up much of the list.

The increase in the popularity of Scourge Heavy Missiles can be seen by their blueprint topping the list, with 93% more being purchased in 2010 than in 2009. Ammunition blueprints feature prominently on the list. Demand for ammo is reliable, the barrier of entry is extremely low and many prefer to make their own, especially if they're not operating close to decent market hubs. Shuttle blueprints have similar qualities, so players often want to be able to make their own to ensure availability at their base of operations. Furthermore, they're just about the simplest product to make since they require only tritanium, which makes them a popular choice for newbies trying their hand at manufacturing.

Anyone that's going to be manufacturing things will in the long run want to do research on the blueprints. The blueprints most often researched in 2010 are shown in tables 14 and 15.

Material Efficiency Research	Runs
Scourge Heavy Missile Blueprint	1,656,593
Nanite Repair Paste Blueprint	1,268,343
Wrath Cruise Missile Blueprint	1,129,781
Paradise Cruise Missile Blueprint	1,071,278
Antimatter Charge L Blueprint	1,024,634
Cataclysm Cruise Missile Blueprint	862,752
Thunderbolt Heavy Missile Blueprint	857,970
Devastator Cruise Missile Blueprint	850,527
425mm Railgun I Blueprint	787,218
Widowmaker Heavy Missile Blueprint	785,424

Table 14: Blueprints most commonly researched for material efficiency in 2010.

Time Efficiency Research	Runs
Nanite Repair Paste Blueprint	1,401,090
Scourge Heavy Missile Blueprint	889,746
Wrath Cruise Missile Blueprint	555,731
Antimatter Charge L Blueprint	508,469
Paradise Cruise Missile Blueprint	477,939
Thunderbolt Heavy Missile Blueprint	468,826
Havoc Heavy Missile Blueprint	435,793
Widowmaker Heavy Missile Blueprint	430,998
Antimatter Charge M Blueprint	429,748
Devastator Cruise Missile Blueprint	425,439

Table 15: Blueprints most commonly researched for time efficiency in 2010.

The difference between table 13 on the one hand and tables 14 and 15 on the other shows how blueprints differ in long-term importance. The Caldari Shuttle blueprint is at 371st place in terms of research for time efficiency and in 395th place for material efficiency. The blueprint for the previously mentioned 425mm Railgun I makes the top 10 for material efficiency, an obvious requirement for mineral compression.

Most notably, the Nanite Repair Paste Blueprint sits in 1st and 2nd place on the research lists, despite only being introduced in May 2010. Its place on the time efficiency list is understandable. Nanite Repair Paste is used extensively in PvP by all types of ships, regardless of weapon types. Being able to produce it for personal use can be quite beneficial. On the other hand, the blueprint's second-place position on the material efficiency list is somewhat unfortunate. In all, 908 players did almost 1.3 million research runs on the blueprints. Every single run was wasted. When starting a manufacturing job, the window with the quoted cost and list of materials shows all three ingredients in Nanite Repair Paste under the heading of Extra Material. Material efficiency has no effect on such extra materials. This should probably be better publicized.

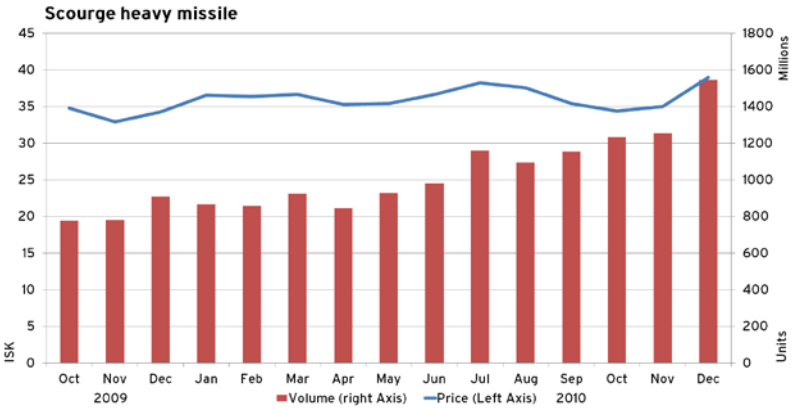


Figure 21: The Scourge Heavy Missile is a long-range missile launched by cruisers and battlecruisers. It was the most produced missile in 2010, with over 11 billion missiles produced. In addition to this, the Drake has been getting increasingly popular and the Drake only gets a damage bonus for this particular missile, which could explain the 46% increase in Scourge volume traded in the past 6 months.

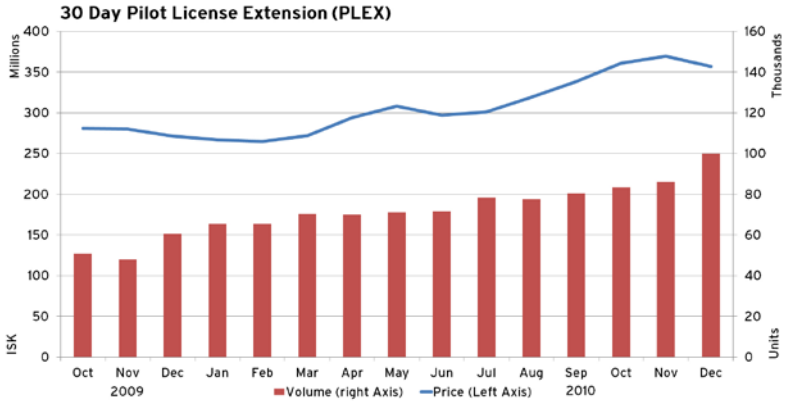


Figure 22: PLEX as a commodity has increased in popularity. As an example, in December it represented 24.3% of the CPI index. In Q4, PLEX prices increased by 7% and the volume traded increased by 14%. This development is very much in line with PLEX usage, as the amount of PLEX activated increased by 8% in the quarter.

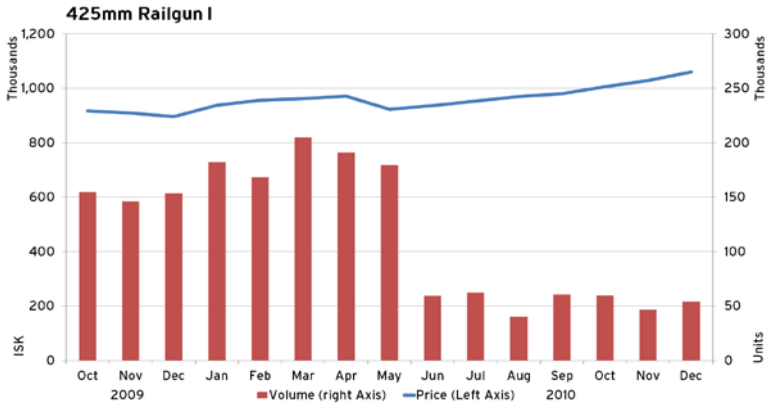


Figure 23: The 425mm Railgun I was the most produced module in 2010 and had 14,300,092 manufacturing runs in the year. In the last 6 months the volume traded dropped by 63%, which is due to NPCs dropping less loot after the Tyrannis expansion in late May.

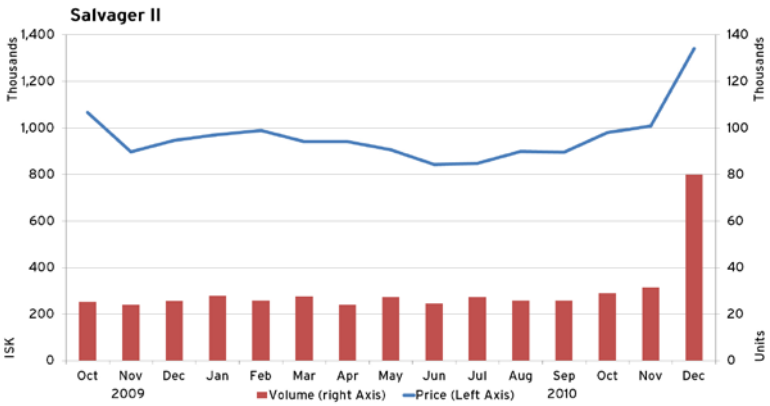


Figure 24: The Salvager II is a specialized scanner used to to detect salvageable items in ship wrecks. Market transactions with the Salvager were relatively stable until December. What happened then is that the Noctis ship was introduced. Because it is a Salvager-intensive ship, demand for the Salvager skyrocketed. In December, the volume traded increased 2.5-fold and prices increased by 33%.

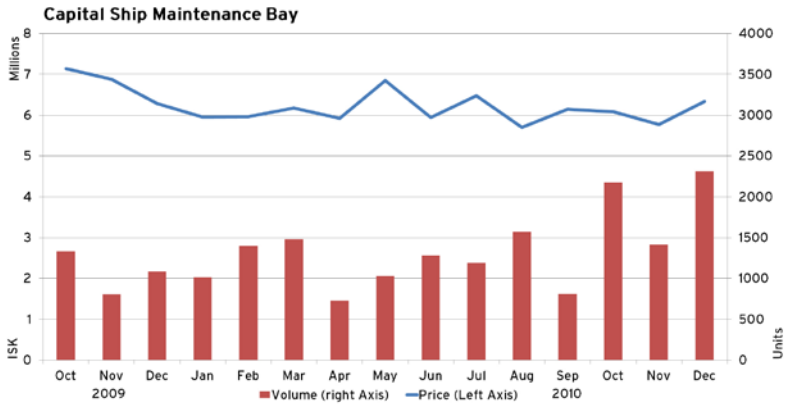


Figure 25: The Capital Ship Maintenance Bay is a component used in manufacturing capital ships. The production of capital ships increased significantly in Q4, which led to a 65% increase in Capital Ship Maintenance Bay volume traded. At the same time, prices remained stable in Q4.

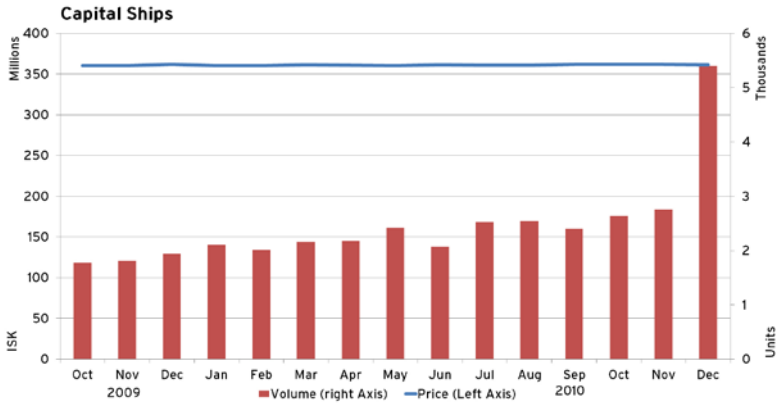
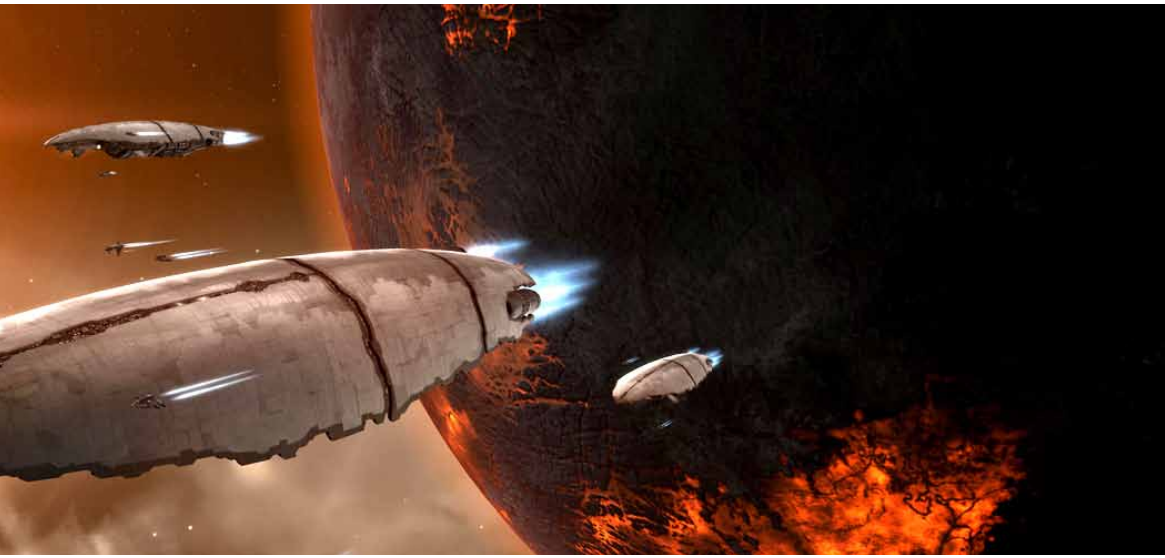
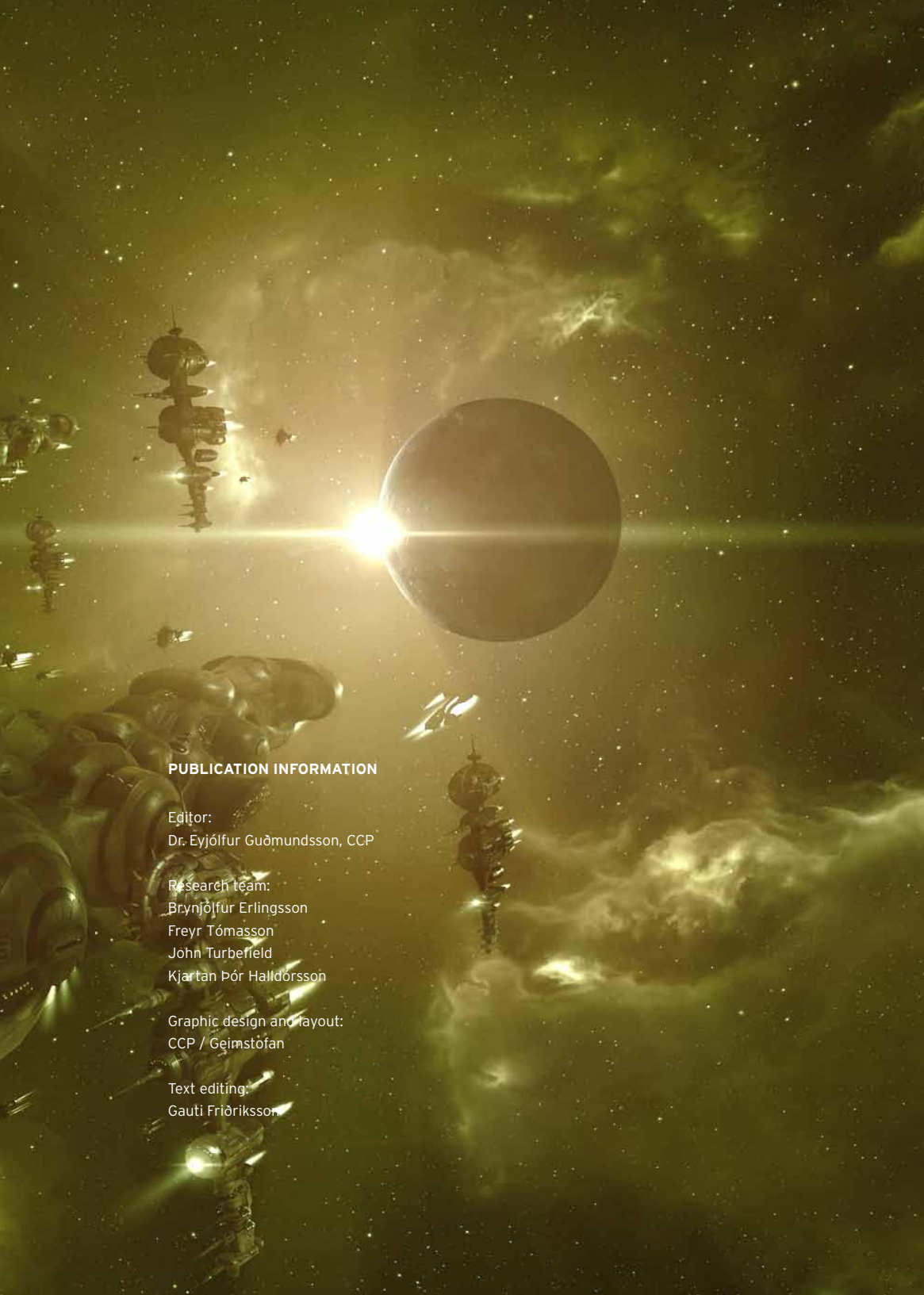


Figure 26: In order to operate capital ships, players need to buy and train the Capital Ships skill. The price of the Capital Ships skill book sold by NPCs is fixed at 360 million ISK and thus the price remains stable at around 360 million ISK. When the learning skills were removed mid-December players started buying more skill books, and the Capital Ships skill doubled in volume traded in December, up to 5,401 units.





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