Analysis of the Impact of the Abolition of Milk Quotas, Increased Modulation and Reductions in the Single Farm Payment on Northern Ireland Agriculture

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Executive Summary

This paper presents the results for Northern Ireland (NI) of the following analyses conducted using the FAPRI-UK modelling system of the dairy, beef, sheep, arable, pig and poultry sectors.

(1) Abolition of EU milk quotas

(a) with existing Uruguay Round Trade Rules

(b) with full export subsidy elimination

(2) Increased rate of modulation to 25% in the UK

(a) with 100% matched funding

(b) with no matched funding

(3) Reduction in and elimination of the Single Farm Payment

(a) 25% reduction in the SFP throughout the EU

(b) elimination of the SFP throughout the EU

(c) 25% reduction in the SFP in the UK only

(d) elimination of the SFP in the UK only

The key findings of the three analyses are summarised below for the year 2016, the end of the projection period.

Abolition of EU milk quotas

- Abolition of milk quotas exerts a significant downward impact on UK dairy prices and production. This effect is more pronounced when export subsidies are also eliminated.
- As a result, NI milk production declines by 10.8% with existing Uruguay Round trade rules and 11.4% when export subsidies are also eliminated. This is less than the corresponding UK-level reductions of 14% and 17%. In both scenarios the decline in production is greatest in England, followed by Scotland and then Wales.
- Nevertheless, the NI milk price falls more than the price in the other UK regions. For example, the NI milk price decreases by 14.9% and 16.1% compared to only 9.4% and 11% in England. This is because in NI a greater proportion of milk goes into processing, than in the rest of the UK.
- NI dairy market receipts fall significantly, due to lower milk prices and reduced production. By 2016, they are 26% lower than the Baseline for the quota abolition scenario and 28% lower when quota abolition is accompanied by export subsidies elimination. Due to increased cereal prices, which inflate the variable costs for the dairy sector, NI dairy

sector market receipts minus variable costs decrease by 32% when the milk quota is abolished. When export subsidies are also eliminated, NI dairy sector market receipts minus variable costs decline further (34% lower than the Baseline in 2016).

Increased modulation

- Increasing the total UK modulation rate to 25% yields a very small negative production impact on the NI beef and sheep sectors and negligibly small price increases, whether or not there is matched funding.
- The other sectors (dairy, crops, pork and poultry) show virtually no response to increased modulation.
- The presence of matched funding restricts the reduction in total farm receipts (market receipts minus variable costs plus decoupled payments).

Reduction in and elimination of the Single Farm Payment

- NI beef production declines slightly following the 25% reduction in the SFP, whether throughout the EU or in the UK only
- The decline in NI beef production is significant, following elimination of the SFP throughout the EU. This decline in production is more pronounced when the SFP is only eliminated in the UK.
- When the SFP is eliminated, the reduction in NI beef production is more pronounced than in the other UK regions. The reduction in NI suckler cow numbers is 11% for EU-wide elimination and 14% for the hypothetical UK-only elimination scenario, compared to 4% and 7% for the UK as a whole. This reflects the fact that beef production in NI is more dependent on the SFP than the rest of the UK.
- NI sheepmeat production declines slightly when the SFP is reduced by 25% in the UK only. When the 25% reduction is implemented throughout the EU, the impact is partially dampened by slightly higher prices.
- The decline in NI sheepmeat production is significant when the SFP is eliminated throughout the EU. When the SFP elimination is implemented only in the UK, the decline is even larger, due to the lack of a positive price response.

- The SFP reduction/elimination scenarios do not show any discernible production and price impacts on the other sectors analysed (dairy, crops, pork and poultry).
- Reducing the SFP by 25% in the UK only has a significant impact on total NI farm receipts (market receipts minus variable costs plus decoupled payments). Market receipts for the total NI agricultural sector remain largely unchanged, but the reduction in decoupled payments reduces the total farm receipts. This impact is slightly smaller when the reduction is implemented EU-wide, due to the corresponding price increases.
- Elimination of the SFP, whether in the UK only or throughout the EU, has a large negative effect on NI farm receipts. This primarily reflects the elimination of the SFP.

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1. Methodology & Baseline Assumptions

1.1 Introduction

The following analyses were conducted using the FAPRI-UK modelling system to analyse the impact on NI agriculture of: (1) abolishing the EU milk quota regime; (2) increased levels of modulation in the UK; and (3) reduction in and elimination of the Single Farm Payment (SFP) throughout the EU and in the UK only. In Chapter 1, an overview of the methodology underlying the policy analyses are described together with assumptions relating to the Baseline. In Chapters 2 to 4 the various policy scenarios are detailed and the results for each main sector presented.

1.2 Methodology

The FAPRI-UK modeling system, which is integrated into the FAPRI European model, produces Baseline projections, over a ten year period, of key variables in the beef, sheep, dairy and cereal sectors for each country in the UK, under the assumption that current policies remain in place and specific macroeconomic assumptions hold. The Baseline does not constitute a forecast, but provides a benchmark against which projections of the policy scenarios can be compared and interpreted. The modeling system was simulated under the following scenarios:

Abolition of Milk Quotas Scenarios;

1(a) Abolition of EU milk quota with Uruguay Round Trade Rules

1(b) Abolition of EU milk quota with full export subsidy elimination

Increased Modulation;

2(a) 25% rate of modulation (UK only) with 100% match funding

2(b) 25% rate of modulation (UK only) with no match funding

Reduction in and Elimination of the Single Farm Payment;

3(a) 25% reduction in the SFP throughout the EU

3(b) 100% reduction in the SFP throughout the EU

3(c) 25% reduction in the SFP in the UK only

3(d) 100% reduction in the SFP in the UK only

1.3. Baseline Assumptions

The following assumptions pertain to the Baseline projections:

- The Baseline incorporates the Fischler CAP Reforms. Of particular importance is the replacement of coupled direct payments with the decoupled Single Farm Payment (SFP). It is assumed that the SFP has a production stimulating effect but that this effect declines over time. Milk production is a function of an incentive price, which includes the production impact of the SFP.

- Compulsory EU Modulation is applied to all direct payments (including the SFP, but excluding the first €5000 paid to each farmer). Additional modulation is applied in each country in the UK at different rates. It is assumed that the financial discipline further reduces direct payments by a limited amount (maximum 5%) over the projection period (further details available from the authors).

- The dairy quota system remains in place. The asymmetric cuts in dairy support prices are implemented as agreed under the Fischler CAP reforms.

- It is assumed that the UK will reallocate 1 million tonnes of grains for ethanol production and domestically source 420 thousand tonnes of rapeseed oil for biodiesel production (which is equivalent to 821 thousand tonnes of rapeseed). Overall, EU biofuels production rises to around 3% of domestic fuel use.

- Set-aside restrictions are assumed to remain in place.

- Assumptions are made regarding the behaviour of the European Commission. In particular, it is assumed that if market prices exceed their intervention levels, the European Commission will not continue to provide export refunds to the dairy sector. Consequently, dairy export refunds would be reduced so that the commodity prices fall close to their intervention levels. Additionally, it is assumed that the Commission will continue its current practice of actively managing the market, so that the export refunds expenditure on the key agricultural products declines over time.

- The EU export subsidy limits and import tariffs, agreed under the Uruguay Round Agreements Act (URAA), remain in place.

- The key macro-economic assumptions incorporated in the Baseline are provided by Global Insight and are reproduced in Appendix A.

2. Abolition of Milk Quotas

2.1. Scenarios Analysed

1(a) Abolition of EU milk quota with Uruguay Round Trade Rules

Under this scenario the EU milk quotas are abolished in 2010 and the EU export subsidy limits and import tariffs that were agreed under the URAA remain in place. In conjunction with the abolition of milk quotas, it is assumed that intervention prices are lowered where necessary to allow the markets to clear, thus avoiding the build up of stocks. It is assumed that no compensation payments are provided.

1(b) Abolition of EU milk quota with full export subsidy elimination

This scenario maintains the same assumptions as scenario 1(a) with the exception that the permitted value of export subsidies, agreed under the URAA, is reduced in equal steps over the five-year period 2008 to 2012. Hence, by 2012 all export subsidies are eliminated. This time frame was selected so that the full effects of the quota elimination could be incorporated by the end of the projection period.

2.2 Results

Milk Quota Abolition with Uruguay Round Trade Rules - Scenario 1(a)

- The abolition of milk quotas throughout the EU generates a surplus of EU milk production (Figure 2.1). This production surplus results in increased production of EU dairy commodities and corresponding reductions in EU prices (Figure 2.2).
- Projected UK dairy commodity prices decrease significantly under the milk quota abolition scenario 1(a) relative to the Baseline (Table 2.1).
- Under this scenario, the intervention price for butter is lowered to allow the market to clear, thus avoiding the build up of stocks. Therefore this product experiences the greatest projected price reduction following quota abolition.

Dairy Sector Projections under the Baseline and the Milk Quotas Abolition Scenarios

Figure 2.1: EU (25) Milk Production

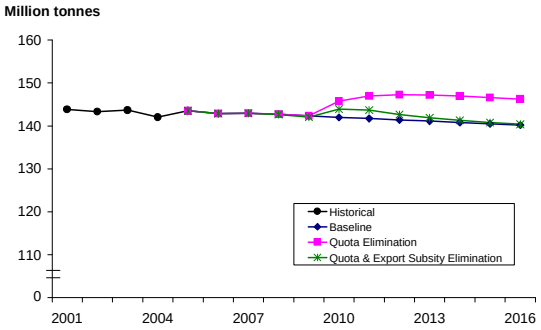


Figure 2.2: EU (25) Milk Price

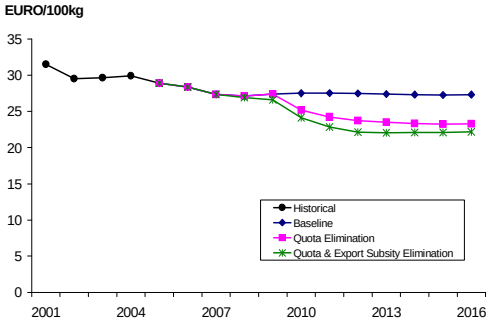


Figure 2.3: NI Producer Milk Price

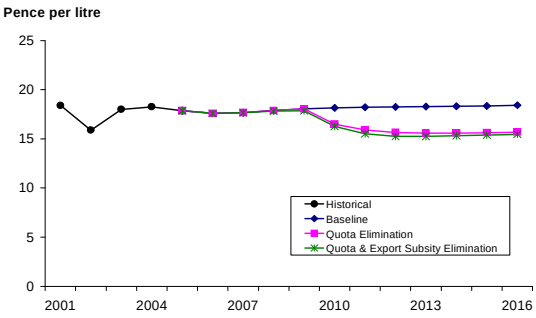


Figure 2.4 NI Milk Production

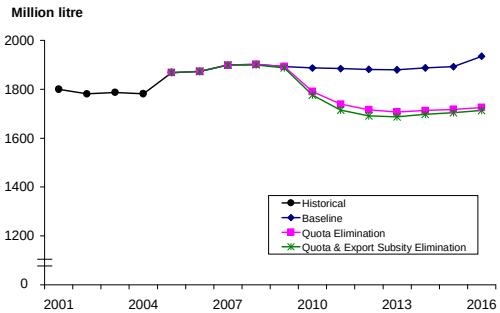


Figure 2.5: Change in Milk Production for each UK Country

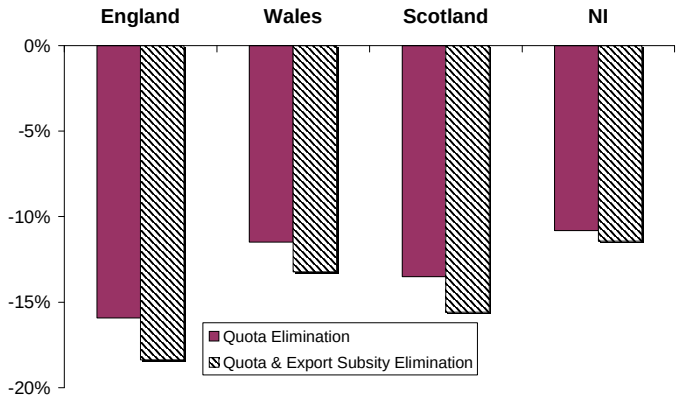


Table 2.1: Percentage Differences in Dairy Prices and Production between the Baseline and each Quota Abolition Scenario (year 2016); figures refer to NI unless otherwise stated

	Quota Abolition	Quota Abolition + Export Subsidy Elimination
	(%)	(%)
Prices		
Producer milk price	-15	-16
UK Cheese price	-12	-14
UK Butter price	-21	-30
UK Skim milk powder	-12	-10
UK Whole milk powder	-12	-24
Production		
Milk production	-11	-11
Dairy cows	-10	-11
Cheese production	-20	-16
Butter production	-22	-24
Skimmed milk powder	-27	-20
Whole milk powder	-18	-36

- The projected fall in UK dairy product prices under the scenario leads to a significant decline, relative to the Baseline, in the projected milk producer prices throughout the UK. The decline in the milk producer price is more pronounced in NI than in the other UK regions. For example, the NI milk price decreases by 15% (Table 2.1) compared to only 9% in England. This reflects the fact that a greater proportion of milk goes into processing in NI, than in the rest of the UK.

- The fall in projected milk producer price leads to a decline in milk production across the UK under the milk quota abolition scenario 1.a. (Figure 2.5). The decline in milk production in the UK is in contrast to the rise of EU milk production (Figure 2.1). Milk production impacts are unevenly distributed across the UK regions. England experiences the largest drop in milk production, followed by Scotland and Wales. NI milk production is the least affected.

- Given the decline in NI milk production, there is less milk available for processing. As a result, NI production of all dairy commodities is significantly lower under the milk quota abolition scenario 1.a. compared to the Baseline, particularly SMP production. SMP experiences the greatest fall, while WMP experiences the least (Table 2.1).

- The decline in milk production also exerts a downward impact on the number of dairy cows. By the end of the projection period there are 10% fewer dairy cows under the milk quota abolition scenario 1.a. compared to the Baseline (Table 2.1).

- The fall in dairy cow numbers, coupled with slightly higher cereal prices (+2%) leads to significant decrease of 3% in beef production, compared to the baseline.

Milk Quota Abolition with Export Subsidy Elimination - Scenario 1(b)

- EU milk production does not change significantly under this scenario compared to the Baseline (Figure 2.1). Dairy commodities, that previously would have been exported, remain in the EU market and exert a downward pressure on prices.

- Projected UK dairy commodity prices decrease significantly under the milk quota abolition with export subsidy elimination scenario, relative to the Baseline. The fall in commodity prices is more pronounced for butter and WMP than when the Uruguay Trade Rules apply (Table 2.1). This reflects the fact that export refunds are used extensively for butter and WMP and the internal EU prices for these commodities are generally significantly higher than those that prevail on world markets.

- The projected fall in dairy product prices leads to a significant decline, relative to the Baseline, in the milk producer price (Table 2.1)

- The fall in the projected milk producer price under scenario 1b leads to a decline in milk production across the UK. This decrease exceeds the fall that occurs under scenario 1.a. (Figure 2.5).

- Milk production impacts are unevenly distributed across the UK regions. Similarly to Scenario 1(a), England experiences the largest drop in milk production, followed by Scotland and Wales. NI's milk production is the least affected.

- Production of dairy commodities declines by a greater amount when export subsidies are eliminated. Moreover the product mix changes. In contrast to Scenario 1(a), WMP production falls by the greatest amount, while cheese is least affected, due to the relative price impacts (Table 2.1).

- The decline in milk production also exerts a downward impact on the number of dairy cows. By the end of the projection period there are 11% fewer dairy cows under the milk quota abolition Scenario 1(b), compared to the Baseline (Table 2.1).

- In contrast to Scenario 1.a., cereal prices decline slightly under Scenario 1.b. compared to the Baseline (-1%), but this is more than offset by the larger decline in dairy cow numbers (due to lower dairy prices). As a result the decline in NI beef production is similar to scenario 1.a. at 4% lower than the baseline.

Market Receipts and Decoupled Payments Projections under the Baseline and Milk Quotas Abolition Scenarios

- Market receipts for the dairy sector decrease significantly by 26% and 28% respectively under the quota abolition and quota abolition plus export subsidy elimination scenarios (Table 2.2). This is similar to the UK average, but results from a smaller decline in production and a larger fall in price.

- Under the quota abolition scenario market receipts for cereals increase due to higher prices. Beef market receipts decline significantly, while higher prices drive up poultry market receipts (Table 2.2).

- When quota abolition is accompanied by the elimination of export subsidies, however, market receipts decline in virtually all sectors (Table 2.2).

- Total market receipts for the NI agricultural sector decrease by 10 per cent and 12 per cent respectively (Table 2.2).

- Projected total receipts for the NI agricultural sector (market receipts minus variable costs plus decoupled payments) decrease by 13 per cent and 14 per cent respectively under scenario 1.a. and 1.b. compared to the Baseline (Table 2.2).

Figure 2.6: NI Market Receipts minus Variable Costs and Other Payments

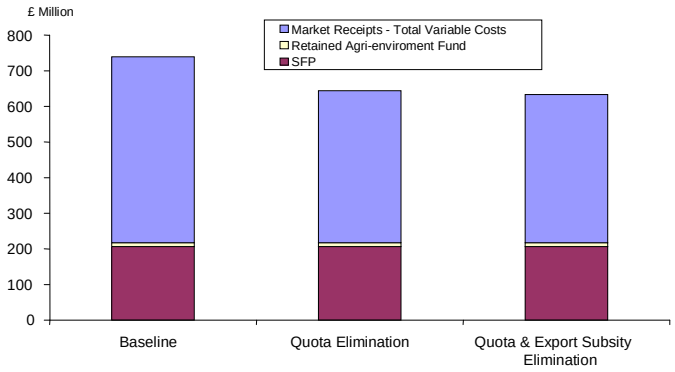


Table 2.2: Differences in Market Receipt, Variable Costs and Decoupled Payments between the Baseline and each Quota Abolition Scenario (year 2016)

	Scenario I(a) Quota Abolition		**Scenario I(b) Quota Abolition + Export Subsidy Elimination**	
	(%)	£ million	(%)	£ million
Market Receipts				
Wheat	3	0	-2	0
Barley	2	0	-1	0
Oats	6	0	-2	0
Rapeseed	3	0	-2	0
Total Crops	2	0	-1	0
Beef	-3	-11	-4	-11
Pig	1	1	-2	-2
Sheep	0	0	0	0
Poultry	1	2	-3	-5
Total Livestock	-1	-8	-3	-18
Milk	-26	-96	-28	-102
Total Market Receipts	-10	-103	-12	-120
Variable Costs				
Wheat	3	0	-2	0
Barley	2	0	-1	0
Oats	6	0	-2	0
Rapeseed	1	0	0	0
Beef	0	0	0	-1
Pig	1	0	-1	0
Sheep	0	0	0	0
Poultry	1	2	-1	-1
Milk	-10	-10	-11	-11
Market Receipts – Variable Costs				
Milk	-32	-86	-34	-91
Decoupled Payments				
SFP	0	0	0	0
Retained Agri-Environmental Funds	0	0	0	0
Market Receipts – Variable Costs + Decoupled Payments	-13	-96	14	-106

2.3 Conclusions

- Abolition of milk quotas exerts a significant downward impact on NI dairy prices and production. When the current Uruguay Round trade rules are maintained, the production impact in NI and the other UK regions contrasts with the rest of the EU, where abolishing the milk quota leads to a moderate increase in milk production.

- When in addition to abolishing milk quotas, export subsidies are also eliminated, the production and price impacts in NI and the rest of the UK are more marked. Total EU milk production remains unchanged.

3. Increased Modulation With and Without Matched Funding

3.1 Scenarios Analysed

2(a) 25% rate of modulation (UK only) with 100% matched funding

In this scenario a 25% national modulation rate is levied with 100% matched funding by the Treasury. This increase in modulation is phased in from 2007 to 2010 in equal steps. By 2010 the total rate of modulation, (compulsory plus voluntary) in all countries in the UK is equal to 25%. Since different regions have their own voluntary modulation rates, this involves different modulation rate increases across the regions with England increasing by much less than the other regions. The compulsory modulation (of up to 5%) is assumed to be subject to franchise, while the voluntary modulation is not. The modulation rates across the rest of the EU remain as in the Baseline. Money raised via modulation is assumed re-distributed into agri-environmental schemes with no production impacts.

2(b) 25% rate of modulation (UK only) with no matched funding

Under the Increased Modulation Scenario 2(b), the assumptions are the same as 2(a) with the exception that there is no matched funding by the Treasury.

3.2 Results

Dairy Sector Projections for the two Increased Modulation (UK only) scenarios

- UK dairy commodity prices do not change when there is 25% modulation in the UK only, relative to the Baseline (Figure 3.1). Consequently, the UK milk producer prices do not change either. The presence or absence of matched funding makes no difference.

- There are no discernible impacts on NI dairy production (Figure 3.2). It is projected that the milk producer price remains relatively strong at the end of the projection period and as a result, reducing the SFP via modulation has no impact on production.

- Production of the dairy commodities shows no significant change.

Dairy Sector Projections under the Baseline and the two increased Modulation Scenarios

Figure 3.1: NI Producer Milk Price

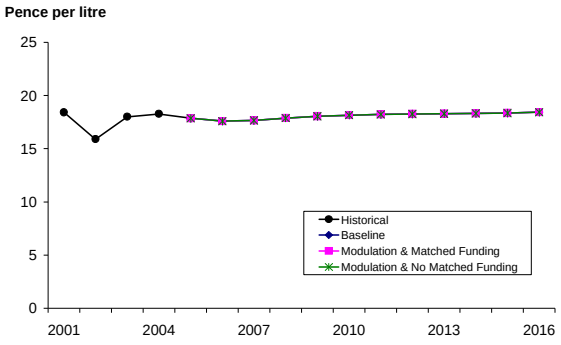
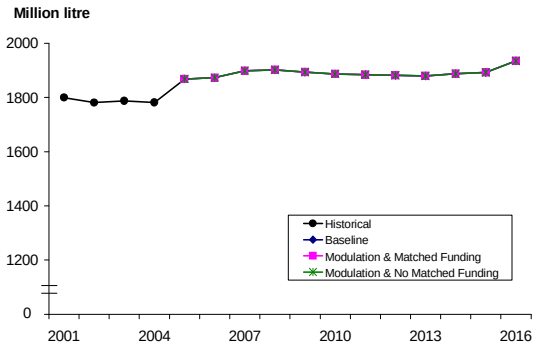


Figure 3.2: NI Milk Production



Beef Sector Projections for the two Increased Modulation (UK only) scenarios

- There is a very slight beef production impact (Figure 3.4) since increased modulation reduces the value of the SFP.

- Increased modulation has a negligible upward impact on projected cattle prices in the NI. (Figure 3.3 and Table 3.1) since this policy change is applied to the UK only and thus the production changes at the EU level are insufficient to generate a sizeable price response.

Beef Sector Projections under the Baseline and the Increased Modulation (UK only) Scenarios

Figure 3.3: Average NI Producer Price of Clean Marketings

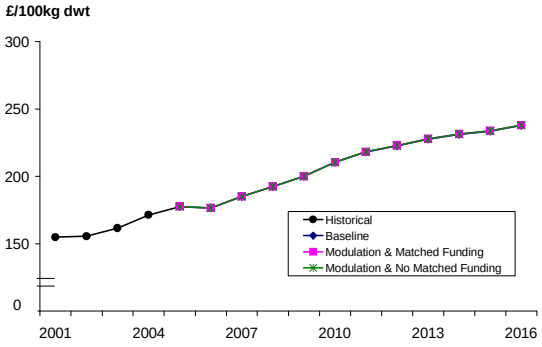


Figure 3.4: NI Beef Production

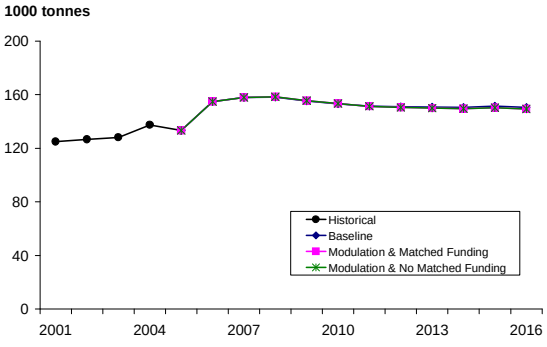


Table 3.1: Percentage Differences in Beef Sector Price and Production between the Baseline and each Modulation Scenario (year 2016)

	25% Modulation + 100% Matched Funding	25% Modulation + No Matched Funding
	(%)	(%)
Suckler cows	-2	-2
Total cows	-1	-1
Beef production	-1	-1
Average NI Producer Price of Clean Marketings	0	0

Sheep Sector Projections for the two Increased Modulation (UK only) Scenarios

- Projected NI ewe numbers decrease by 1% under the modulation scenario compared to the Baseline in response to the reduced value of the SFP (Figure 3.6 and Table 3.2).

- Following the drop in production the projected sheep meat price is only marginally higher than in the Baseline (Figure 3.5 and Table 3.2). Presence or absence of matched funding makes no difference.

Sheep Sector Projections for the Baseline and Increased Modulation (UK only) Scenarios

Figure 3.5: Average NI price of Finished Sheep and Lambs

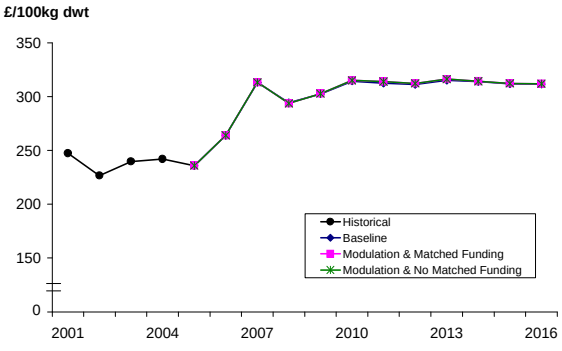


Figure 3.6: NI Sheep Meat Production

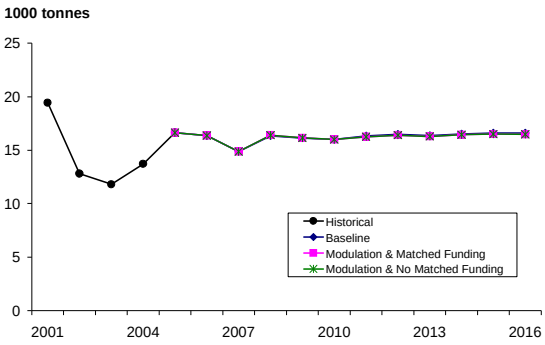


Table 3.2: Percentage Differences in Sheep Sector Price and Production between the Baseline and each Scenario (year 2016)

	25% Modulation + 100% Matched Funding	25% Modulation + No Matched Funding
	(%)	(%)
Ewes	-1	-1
Sheep production	-1	-1
Average NI price of finished sheep and lambs	0	0

Arable Sector Projections for the two Increased Modulation (UK only) scenarios

- Increased modulation has a negligible impact on the production of wheat, barley and rapeseed. This is partly due to the assumed smaller production impact of the SFP in the crop sector.
- Crop prices remain unchanged compared to the Baseline due to the negligible production impacts (Figures 3.7 and 3.8).
- It should also be noted that the pig and poultry sectors do not show any discernable impacts. These sectors are not directly supported and all changes there are due to cross price effects. The negligible price changes in the other sectors are not sufficient to significantly affect pigs and poultry.

Arable Sector Projections under the Baseline and the Increased Modulation (UK only) Scenarios

Figure 3.7:NI Wheat Price

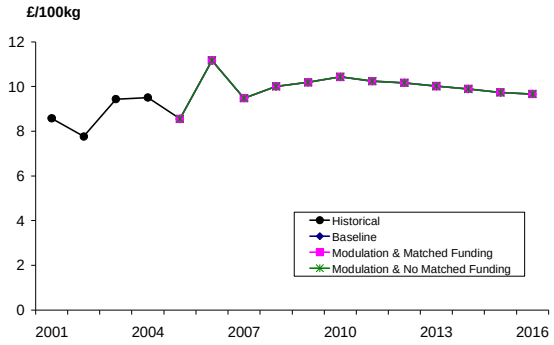
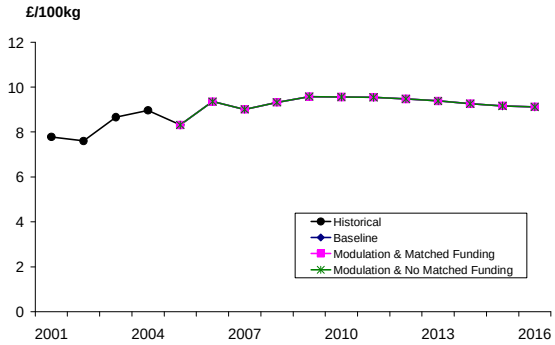


Figure 3.8: NI Barley Price



Market Receipts and Decoupled Payments Projections for the two Increased Modulation (UK only) Scenarios

- Market receipts for each sector do not change significantly under the two increased modulation scenarios.

- Projected NI total receipts (market receipts minus variable costs plus decoupled payments) decrease by 2 per cent and 4 per cent respect to each modulation scenarios compared to the Baseline. (Table 3.3).

Figure 3.9: NI Market Receipts minus Variable Costs and Other Payments

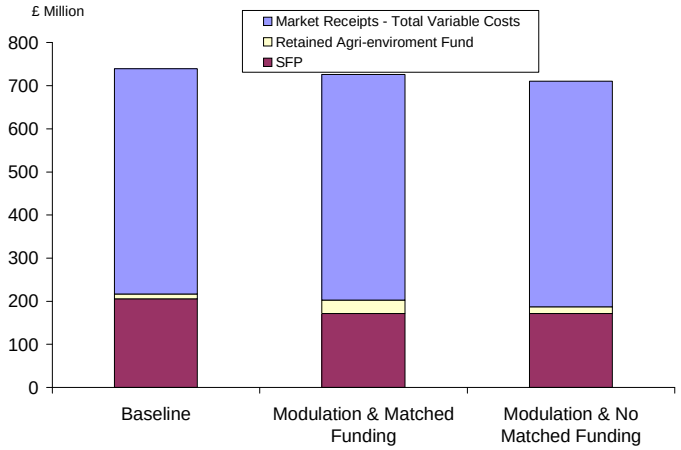


Table 3.3: Differences in Market Receipts, Variable Costs and Other Payments between the Baseline and Increased Modulation Scenarios (year 2016)

	25% Modulation +100% Matched Funding		**25% Modulation + No Matched Funding**	
	(%)	£ million	(%)	£ million
Market Receipts				
Total Crops	-1	0	-1	0
Total Livestock	0	-3	0	-3
Milk	0	0	0	0
Total Market Receipts	0	-3	0	-3
Total Variable Costs	-1	-3	-1	-3
Decoupled Payments				
SFP	-17	-35	-17	-35
Retained Agri- Environmental Funds	195	21	47	5
Market Receipts – Variable Costs + Decoupled Payments	-2	-13	-4	-29

3.3. Conclusions

- Increasing the total UK modulation rate to 25% yields a marginal production impact on the NI beef and sheep sectors and negligibly small price increases, irrespective of presence or absence of matched funding.

- The other sectors (dairy, crops, pork and poultry) show virtually no response.

4. Reduction in and Elimination of the Single Farm Payment

4.1 Scenarios Analysed

3(a) 25% reduction in the SFP throughout the EU

The SFP and the partially coupled payments are reduced by 25% throughout the EU. The reduction in the SFP is phased in from 2007 to 2010 in equal yearly increments. Since Financial Discipline amounting to 5% is already applied in the Baseline, the SFP is effectively reduced by 20% under this scenario compared to the Baseline.

3(b) 100% reduction in the SFP throughout the EU

This scenario maintains the same assumptions as scenario 3(a), except that the reduction in the SFP throughout the EU is 100%.

3(c) 25% reduction in the SFP in the UK only

The 25% reduction of the SFP is applied only in the UK, with the rest of the EU maintaining the same level of financial discipline as in the Baseline.

3(d) 100% reduction in the SFP in the UK only

The 100% reduction of the SFP is applied only in the UK, with the rest of the EU maintaining the same level of financial discipline as in the Baseline.

Scenarios 3(c) and 3(d) are purely hypothetical since the EU legislation does not allow member states to apply different rates of financial discipline. In scenarios 3(b) and 3(d) where appropriate the modulation rates are also reduced (to zero by 2010), while in the other two scenarios the corresponding modulation rates are the same as in the baseline.

4.2 Results

Dairy Sector Projections for Reductions in the SFP Scenarios 3(a), (b), (c) & (d)

- Reductions in the SFP have no discernible impact on NI dairy production and prices (Figures 4.1. and 4.2), because the production enhancing impact of the dairy component of the SFP is small and insufficient to drive production below quota.

Figure 4.1: NI Producer Milk Price*

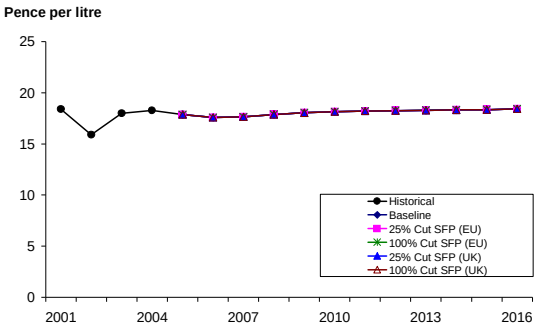
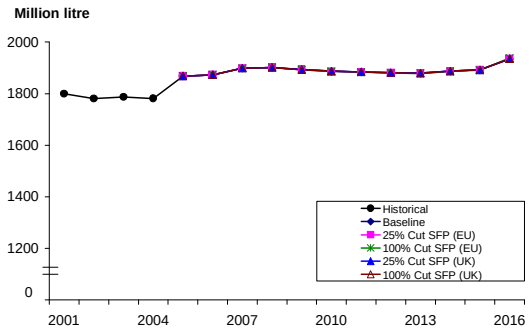


Figure 4.2: NI Milk Production



Beef Sector Projections for Reductions in the SFP Scenarios 3(a), (b), (c) & (d)

Scenario 3(a) 25% reduction in the SFP throughout the EU

- The EU-wide 25% reduction of the SFP has a slightly negative impact on NI beef cow numbers and beef production (Figure 4.4). Although decoupled, the SFP is still assumed to have some residual production enhancing impact. Hence reducing its value leads to a slight drop in production.

- The decrease in supply results in slightly higher beef prices (Figure 4.3).

Scenario 3(b) 100% reduction in the SFP throughout the EU

- Eliminating the SFP throughout the EU leads to significant decreases in the NI beef herd size and production. The removal of the SFP under this scenario is offset to a certain extent by the positive price impact, see below. The NI beef sector decreases more than the rest of the UK. This demonstrates the greater dependence of the NI beef sector on the SFP.

- This price impact reflects the fact that under the baseline some direct payments in certain EU countries remain linked to production and thus the complete removal of the payments has significant production impact throughout the EU. In NI, suckler cow numbers are 11% lower, and beef production falls by 6% relative to the Baseline.

- The UK beef price is 5% higher under this scenario compared to the baseline (Table 4.1).

Beef Sector Projections for Baseline and Reductions in the SFP Scenarios 3(a), (b), (c) & (d)

Figure 4.3: Average NI Producer Price of Clean Marketings

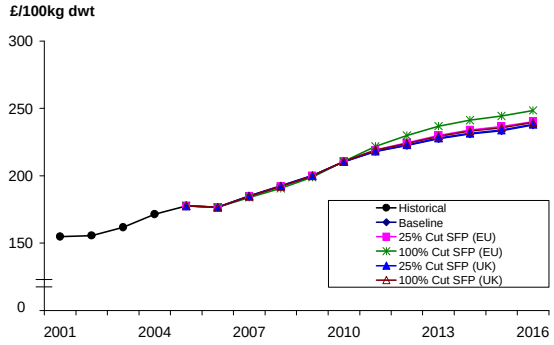


Figure 4.4: NI Beef Production

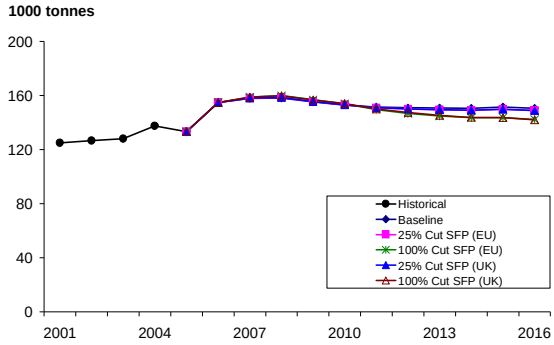


Table 4.1: Percentage Differences in Beef Sector Price and Production between the Baseline and SFP Reduction Scenarios (year 2015)

	25% Reduction of SFP (EU)	**100%Reduction of SFP (EU)**	**25% Reduction of SFP (UK)**	**100%Reduction of SFP (UK)**
	(%)	(%)	(%)	(%)
Suckler cows	-2	-11	-3	-14
Total cows	-1	-5	-1	-6
Beef production	-1	-6	-1	-6
Average NI Producer Price of Clean Marketings	1	5	0	1

Scenario 3(c) 25% reduction in the SFP in the UK only

- Reducing the SFP by 25% only in the UK has a modest production impact in the beef sector. Under this scenario NI suckler cow number are 3% below the baseline in 2016 (Table 4.1).

- Since the policy change applies only to the UK, there is no impact on the rest of the EU. Consequently, unlike in scenario (3a), the beef price does not change significantly, relative to the baseline.

Scenario 3(d) 100% reduction in the SFP in the UK only

- Eliminating the SFP only in the UK exerts a negative impact on the NI cattle herd size and beef production. Suckler cow numbers are down 14% compared to the Baseline, while beef production is 6% lower (Table 4.1).

- The impact on suckler cow numbers exceeds that which occurs under the equivalent EU-wide scenario (3b) since the elimination of the SFP (in the UK only) is not offset by a significant price impact.

Sheep Sector Projections for Reductions in the SFP Scenarios 3(a), (b), (c) & (d)

Scenario 3(a) 25% reduction in the SFP throughout the EU

- The EU-wide 25% reduction in the SFP has a slight downward impact on ewe numbers and sheep meat production (Figure 4.6).

- The decrease in supply results in slightly higher sheep meat prices (Figure 4.5).

Figure 4.5: Average NI price of finished sheep and lambs

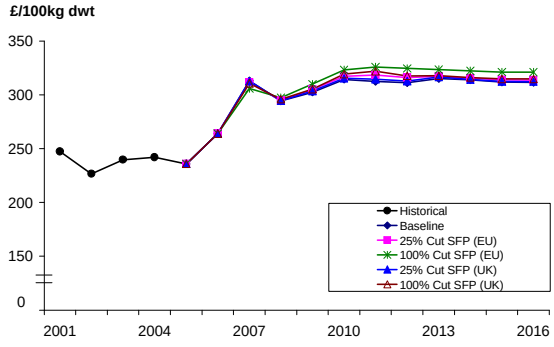


Figure 4.6: NI Sheep meat Production

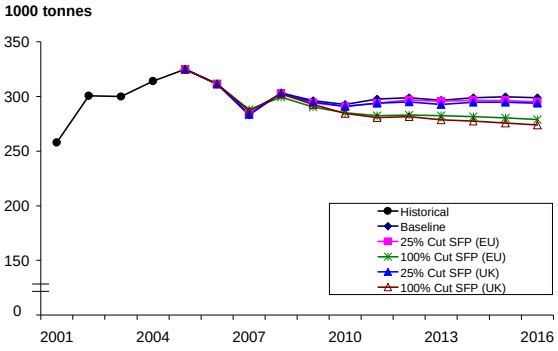


Table 4.2: Percentage Differences in Sheep Meat Price and Production between the Baseline and each SFP reduction scenario (year 2016)

	25% Reduction of SFP (EU)	100%Reduction of SFP (EU)	25% Reduction of SFP (UK)	100%Reduction of SFP (UK)
	(%)	(%)	(%)	(%)
Ewes	-1	-6	-2	-8
Sheep production	-1	-4	-2	-5
Average NI price of finished finished sheep and lambs	1	3	0	1

Scenario 3(b) 100% reduction in the SFP throughout the EU

- Eliminating the SFP in the EU leads to significant decreases in the NI ewe herd size (6%) and NI sheep meat production (4%) (Table 4.2). This is due to the fact that the SFP assists in maintaining some marginal sheep production.

- Sheep meat production declines elsewhere in Europe and as a result the NI sheep meat price rises relative to the baseline (Figure 4.5).

Scenario 3(c) 25% reduction in the SFP in the UK only

- Applying the 25% reduction in the SFP only to the UK has a small negative impact on NI ewe herd size and sheep meat production (Table 4.2).

- Due to the lack of impact in the rest of the EU, however, prices do not change significantly (Figure 4.5).

- The downward production impact of a UK-only reduction in the SFP is slightly greater than when the 25% reduction is applied throughout the EU.

Scenario 3(d) 100% reduction in the SFP in the UK only

- Eliminating the SFP only in the UK exerts a downward impact on NI ewe herd size and sheepmeat production. Ewe numbers and sheepmeat production are 8% and 5% lower compared to the Baseline by the end of the projection period (Table 4.2).

- While the value of the SFP in the rest of the EU remain the same as in the Baseline, the comparatively large declines in the NI sheep sector and the rest of the UK causes the NI lamb price to increase by 1%.

Arable Sector Projections under the Baseline and Reductions in the SFP Scenarios

- The SFP reduction scenarios have a negligible impact in the crop sector (Figures 4.7 and 4.8). It is projected that in the Baseline crop prices increase over the projection period due to increased demand for cereals and oilseed for bio-fuel production. These high crop prices are more than sufficient to offset the negative impact of the reductions of the SFP and allow cereal and oilseed production to remain profitable.

Figure 4.7: NI Wheat Price

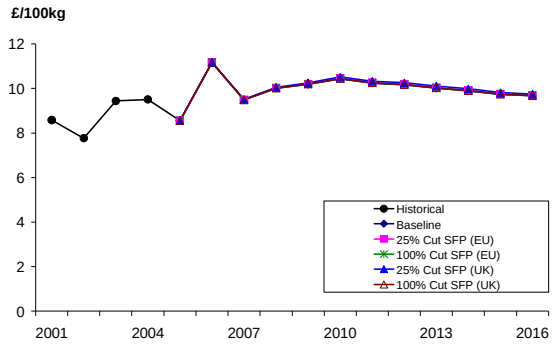
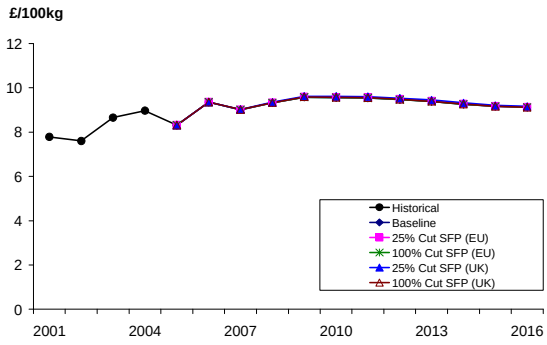


Figure 4.8: NI Barley Price



- The SFP reduction scenarios have negligible impact of the pork and poultry sectors.

Market Receipt and Other Payments Projections for the Reductions in the SFP Scenarios

- Market receipts for each sector do not change significantly under the 25% reduction of SFP, whether throughout the EU or in the UK only (Table 4.3).

- Owing to the franchise, the 25% reduction in the nominal SFP only yields a 22% reduction in the funds actually received by the farming sector (Table 4.3).

- It is projected that total NI farm receipts (market receipts minus variable costs plus decoupled payments) decrease by 6% and 7% under the 25% reduction in SFP scenarios (EU & UK) compared to the Baseline (Table 4.3). The reduction in the SFP contributes to the decline in the total receipts of the NI agriculture sector.

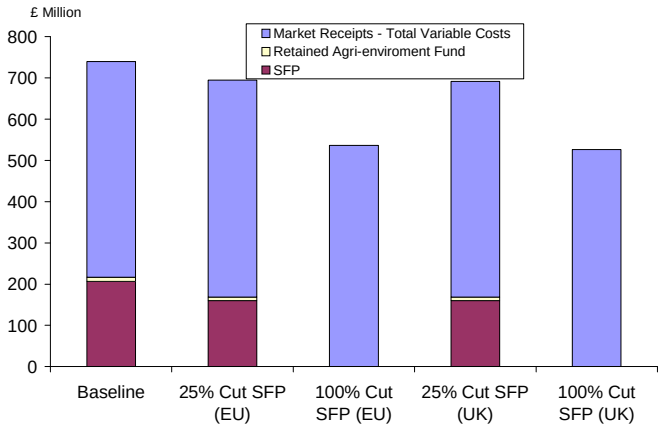
- Crop market receipts remain largely unchanged under the 100% reductions of SFP Scenarios (Table 4.3).

- Market receipts in the livestock sector remain stable except the sheep sector in which they decrease by 4% and 5% per cent under the 100% reduction of SFP scenario (EU and UK). However, total market receipts for the livestock sector as a whole remain largely unchanged (Table 4.3).

Table 4.3: Differences in Market Receipts, Variable Costs and Decoupled Payments between the Baseline and the Reductions in the SFP Scenarios (year 2016)

	25% Reduction in SFP (EU)		**100%Reduction in SFP (EU)**		**25% Reduction in SFP (UK)**		**100% Reduction in SFP (UK)**	
	(%)	£ million	(%)	£ million	(%)	£ million	(%)	£ million
Market Receipts								
Total Crops	-1	0	-4	-1	-1	0	-4	0
Beef	0	0	-1	-4	-1	-3	-5	-16
Pig	0	0	1	1	0	0	0	0
Sheep	0	0	-4	-2	-1	0	-5	-2
Poultry	0	0	1	1	0	0	0	0
Total Livestock	0	0	-1	-3	-1	-4	-3	-18
Milk	0	0	0	1	0	1	0	0
Total Market Receipts	0	0	0	-3	0	-4	-2	-18
Variable Costs								
Total Crops	-1	0	-5	0	-1	0	-5	0
Beef	-2	-3	-11	-16	-3	-4	-14	-20
Pig	0	0	1	0	0	0	0	0
Sheep	-1	0	-6	-2	-2	0	-8	-2
Poultry	0	0	1	1	0	0	0	0
Total Livestock								
Milk	0	0	0	0	0	0	0	0
Total Variable Costs	-1	-3	-3	-16	-1	-4	-5	-22
Decoupled Payments								
SFP	-22	-46	-100	-206	-22	-46	-100	-206
Retained Agri-Environmental Funds	-22	-2	-100	-11	-22	-2	-100	-11
Market Receipts – Variable Costs+ Decoupled Payments	-6	-45	-28	-203	-7	-48	-29	-213

Figure 4.9: NI Market Receipts minus Variable Costs and Other Payments



- It is projected that total NI farm receipts (market receipts minus variable costs plus decoupled payments) decrease significantly by 28% and 29% respectively under the 100% reduction of SFP scenarios (EU & UK) compared to the Baseline (Table 4.3 and Figure 4.9). The reduction in the SFP largely contributes to the decline in total receipts for the NI agricultural sector.

4.3 Conclusions

- Reductions in the SFP by 25% both EU wide and for the UK only, produce a moderate decrease in the NI beef production. In the latter case the decline is slightly greater, since unlike the EU-wide scenario there is no corresponding price increase.

- Eliminating the SFP leads to a significant decline in NI beef production. This decline is more pronounced when the SFP is implemented only in the UK. The NI beef sector is more dependent on the SFP than the rest of the UK.

- Reducing or elimination the SFP EU-wide has a small negative impact on sheepmeat production. The production impact is partially dampened by slightly higher prices.

- When this reduction is implemented for the UK only, however, the sheep sector decline is significant. The 25% reduction in the SFP (coupled with the Baseline modulation rates) captures most of this production impact.

- The SFP reduction scenarios do not show any discernible impact in the other analysed sectors (dairy, crops, pork and poultry). Pork and poultry are not directly supported by the SFP. The contribution of the SFP to the dairy sector is relatively small, and the comparatively strong milk price at the end of the projection period ensures the quota is fulfilled. The energy crops demand leads to high cereals and oilseeds prices and correspondingly crop production is profitable without the SFP.

Appendix A

Macroeconomic Assumptions

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP growth - percent													
EU-15	percent	1.5%	1.9%	1.8%	2.1%	2.2%	2.0%	2.0%	1.9%	1.9%	1.9%	1.9%	2.4%
France	percent	1.5%	1.8%	1.7%	1.8%	2.1%	1.8%	1.8%	1.9%	1.9%	1.8%	1.7%	4.2%
Germany	percent	1.1%	1.7%	1.0%	1.6%	1.7%	1.8%	1.7%	1.6%	1.6%	1.5%	1.6%	1.3%
Italy	percent	0.2%	1.0%	1.2%	1.4%	1.6%	1.3%	1.4%	1.4%	1.4%	1.3%	1.3%	2.2%
United Kingdom	percent	1.6%	2.2%	2.7%	3.0%	2.8%	2.6%	2.6%	2.5%	2.5%	2.4%	2.4%	2.9%
Other EU	percent	2.3%	2.6%	2.4%	2.4%	2.6%	2.4%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%
NMS-10	percent	4.1%	4.5%	4.6%	4.6%	4.5%	4.3%	4.2%	3.6%	3.4%	3.4%	3.4%	7.7%
Poland	percent	3.3%	4.5%	4.9%	5.3%	5.2%	4.9%	4.7%	3.5%	3.3%	3.1%	3.2%	3.0%
Hungary	percent	4.0%	4.0%	4.0%	4.0%	4.1%	3.7%	3.6%	2.9%	2.9%	2.8%	2.9%	4.2%
Other NMS	percent	5.4%	5.1%	5.1%	4.7%	4.5%	4.3%	4.2%	4.1%	3.9%	3.9%	3.9%	3.2%
Bulgaria	percent	5.6%	4.5%	4.4%	4.1%	3.8%	3.9%	3.5%	3.2%	3.1%	3.2%	3.3%	3.2%
Romania	percent	5.2%	6.2%	6.4%	6.2%	6.2%	6.0%	6.2%	5.2%	4.9%	4.6%	4.2%	3.7%
Inflation (GDP deflator) - percent													
EU-15	percent	1.6%	1.8%	2.2%	1.9%	1.7%	1.7%	1.8%	1.8%	1.9%	1.8%	1.8%	1.8%
France	percent	1.3%	1.9%	1.8%	1.7%	1.6%	1.7%	1.8%	1.7%	1.8%	1.9%	1.9%	1.9%
Germany	percent	0.4%	0.8%	1.7%	1.1%	1.1%	1.1%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%
Italy	percent	2.0%	2.4%	2.6%	2.4%	2.0%	2.0%	2.2%	2.4%	2.4%	2.3%	2.0%	2.0%
United Kingdom	percent	2.4%	2.6%	2.3%	2.6%	2.4%	2.4%	2.3%	2.3%	2.3%	2.4%	2.4%	2.4%
NMS-10	percent	2.8%	2.2%	2.4%	2.4%	2.5%	2.4%	2.3%	2.3%	2.4%	2.4%	2.3%	2.3%
Poland	percent	2.1%	2.0%	2.3%	2.3%	2.4%	2.4%	2.4%	2.3%	2.5%	2.4%	2.3%	2.4%
Hungary	percent	3.5%	2.4%	2.5%	2.5%	2.5%	2.4%	2.2%	2.2%	2.3%	2.3%	2.3%	2.2%
Bulgaria	percent	7.9%	6.1%	5.6%	4.3%	2.7%	2.7%	2.2%	2.2%	2.2%	2.3%	2.3%	2.3%
Romania	percent	9.3%	5.7%	3.7%	3.7%	3.2%	2.4%	2.3%	2.3%	2.0%	1.9%	1.8%	1.9%
Exchange rate vs. dollar													
EU-15	euro/$	0.79	0.79	0.71	0.66	0.70	0.72	0.72	0.71	0.70	0.69	0.68	0.67
France	FF/$	5.19	5.18	4.64	4.36	4.59	4.74	4.74	4.67	4.60	4.54	4.47	4.41
Germany	DM/$	1.55	1.54	1.38	1.30	1.37	1.41	1.41	1.39	1.37	1.35	1.33	1.32
Italy	IL/$	1532.89	1528.79	1370.12	1285.90	1355.18	1398.33	1398.04	1377.78	1358.09	1338.96	1320.36	1302.28
United Kingdom	£/$	0.55	0.54	0.51	0.49	0.52	0.54	0.54	0.53	0.52	0.51	0.51	0.50
NMS-10	euro/$	0.79	0.79	0.71	0.66	0.70	0.72	0.72	0.71	0.70	0.69	0.68	0.67
Poland	ZL/$	3.22	3.10	2.77	2.60	2.74	2.82	2.82	2.78	2.74	2.70	2.67	2.63
Hungary	FL/$	195.51	200.11	179.23	168.21	177.27	182.92	182.88	180.23	177.65	175.15	172.72	170.35
Bulgaria	lev/$	1.55	1.55	1.39	1.30	1.37	1.41	1.41	1.39	1.37	1.35	1.34	1.32
Romania	lei/$	2.87	2.89	2.95	3.01	3.06	3.09	3.09	3.12	3.26	3.26	3.26	3.21
Exchange rate vs. euro													
France	FF/euro	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56
Germany	DM/euro	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Italy	IL/euro	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27	1936.27
United Kingdom	£/euro	0.69	0.69	0.72	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Poland	ZL/euro	4.06	3.93	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91
Hungary	FL/euro	246.96	253.45	253.29	253.29	253.29	253.29	253.29	253.29	253.29	253.29	253.29	253.29
Bulgaria	lev/euro	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
Romania	lei/euro	3.62	3.66	4.17	4.53	4.37	4.28	4.28	4.38	4.65	4.71	4.78	4.78
Other exchange rates													
Dollars per euro	$/euro	1.26	1.27	1.41	1.51	1.43	1.38	1.38	1.41	1.43	1.45	1.47	1.49
Dollars per UK pound	$/£	1.82	1.84	1.96	2.03	1.92	1.86	1.86	1.89	1.92	1.95	1.97	2.00
Euro per UK pound	euro/£	1.44	1.45	1.39	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
Population													
EU-15	million	382.98	383.83	384.61	385.33	385.99	386.61	387.21	387.80	388.34	388.87	389.38	389.86
France	million	60.72	60.90	61.09	61.28	61.45	61.61	61.77	61.92	62.05	62.18	62.31	62.42
Germany	million	82.56	82.61	82.66	82.70	82.74	82.75	82.76	82.76	82.76	82.75	82.74	82.72
Italy	million	57.43	57.49	57.54	57.57	57.57	57.58	57.58	57.58	57.58	57.57	57.55	57.51
United Kingdom	million	60.02	60.25	60.48	60.71	60.93	61.17	61.40	61.64	61.88	62.12	62.37	62.62
Other EU	million	122.25	122.57	122.84	123.08	123.30	123.51	123.70	123.90	124.07	124.25	124.42	124.59
NMS-10	million	81.51	81.37	81.23	81.08	80.94	80.79	80.60	80.41	80.21	80.02	79.75	79.60
Poland	million	38.49	38.48	38.46	38.45	38.43	38.42	38.37	38.32	38.27	38.22	38.17	38.13
Hungary	million	10.03	9.97	9.90	9.84	9.78	9.71	9.65	9.59	9.52	9.46	9.32	9.28
Other Candidates	million	32.99	32.92	32.86	32.79	32.73	32.66	32.58	32.50	32.42	32.34	32.25	32.19
Bulgaria	million	7.71	7.67	7.62	7.57	7.52	7.46	7.40	7.34	7.28	7.23	7.17	7.11
Romania	million	21.66	21.59	21.53	21.46	21.40	21.34	21.27	21.19	21.10	21.02	20.93	20.85