EUROCONTROL
Medium-Term Forecast

Flight Movements
2006 - 2012

Volume 1

EUROCONTROL

EXECUTIVE SUMMARY

This report presents the 2006 update of the annual EUROCONTROL Medium-Term Forecast. The forecast considers the development of IFR traffic in Europe over the next 7 years.

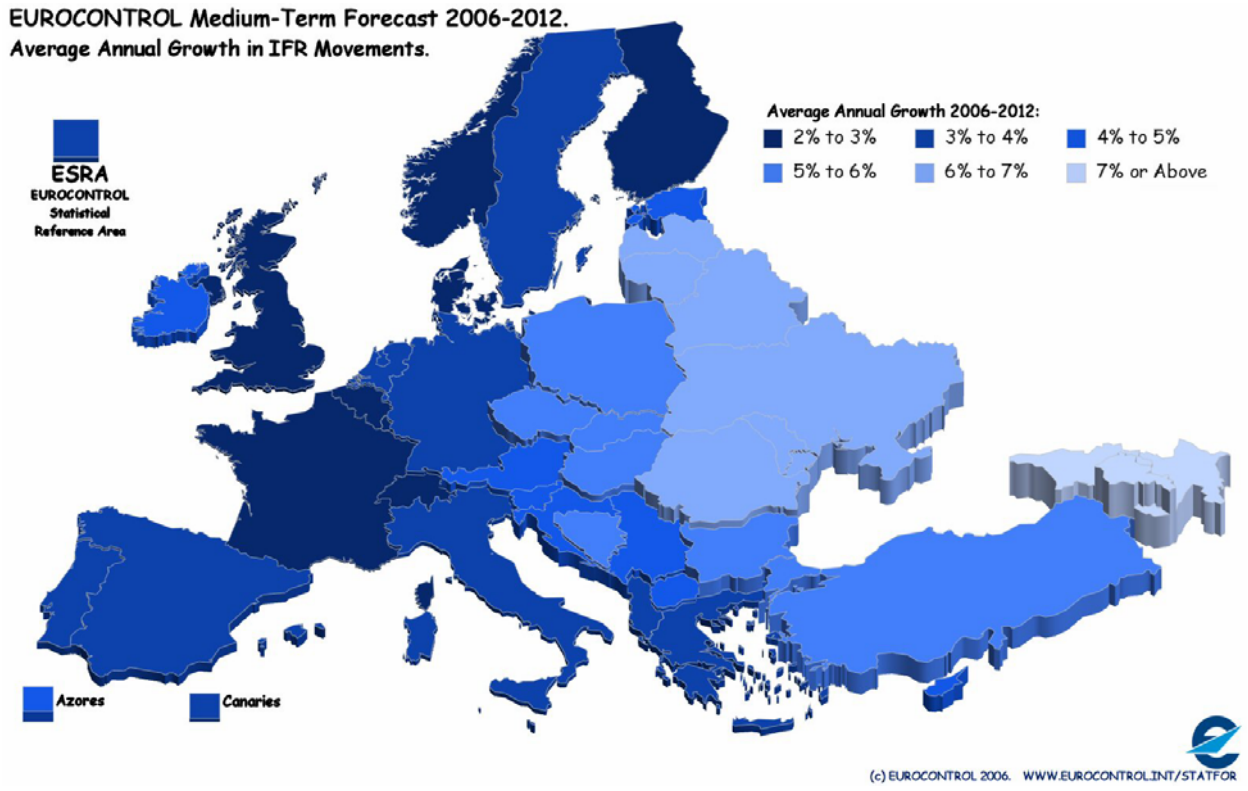
The forecast is that there will be 11.4 million IFR movements in the EUROCONTROL Statistical Reference Area (ESRA) in 2012, 26% (±6%) more than in 2005. This is an average growth of 3.3% per year.

The EUROCONTROL Medium-Term Forecast grows current airport-pair traffic using a model of economic and industry developments. It then calculates overflights based on an assumption of fixed routing, using patterns observed in the baseline year, 2005.

Any user of the forecast is strongly advised to use the forecast range (low-growth to high-growth) as a means to manage risk. There are also a number of other important risks, which this forecast has not included. In particular, the possibility should be considered of changes to the routing of traffic and of external events, such as the consequences of the current outbreak of avian influenza.

The Medium-Term Forecast assumes that the route network and routing on it do not change from the baseline year (2005). For most States in Europe, most of their traffic is in overflights, and in fact can be quite sensitive to changes in routing. However, the sensitivity of the forecast to future route network is lower than last year as a result of network changes in South-East Europe. This report describes this sensitivity in more detail.

Figure 1. Average annual growth 2006-2012 for each State.



The largest effects on traffic of the expansion of the EU are now over. The future accession of Bulgaria and Romania is factored into the forecast. Additional open skies agreements, such as for the EU with Morocco, Ukraine and United States are not included in the model and present an upside-risk.

Slower growth and revised airport capacities have reduced the impact of airport constraints to around a total of 130,000 IFR departures (1% off total growth over 7 years). With recent strong growth forecast to continue, Istanbul will join the list of capacity-constrained airports in around 2010.

The high-speed train network reduces growth by about 80,000 movements (1%) in total over 7 years. Spain and Italy see the largest percentage reductions, about 4% and 2% respectively.

The new medium-term forecast is three years behind the forecast made just before 9/11/01, ie it reaches the same traffic volumes around 3 years later. It has less growth than the 2005 forecast, because of slow 2005-2006 growth and weaker economic forecasts, amongst other factors.

The EUROCONTROL Medium-Term Forecast will next be reviewed in February 2007.

Figure 2. Summary of the forecast for the ESRA.

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Annual Average 2012/ 2005
IFR Movements (thousands)	High	.	.	.	9,525	9,961	10,398	10,826	11,217	11,634	12,019	**4.1%**
	Base	8,344	8,745	9,087	9,424	9,759	10,065	10,389	10,738	11,065	11,405	**3.3%**
	Low	.	.	.	9,336	9,589	9,820	10,081	10,375	10,654	10,925	**2.7%**
Growth (compared to previous year)	High		.	.	4.8%	4.6%	4.4%	4.1%	3.6%	3.7%	3.3%	**4.1%**
	Base		4.8%	3.9%	3.7%	3.6%	3.1%	3.2%	3.4%	3.0%	3.1%	**3.3%**
	Low		.	.	2.7%	2.7%	2.4%	2.7%	2.9%	2.7%	2.5%	**2.7%**

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FOR THE SAFETY OF AIR NAVIGATION

EUROCONTROL

EUROCONTROL Medium-Term Forecast: IFR Flight Movements 2006-2012

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Abstract

This medium-term forecast of IFR flight movements has been prepared by the EUROCONTROL Statistics and Forecast Service (STATFOR).

Volume 1 contains a description and discussion of the main results. Volume 2 contains more detail of the forecasts for individual States.

Keywords

STATFOR	Forecast	Medium-Term	Traffic Flow
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DOCUMENT APPROVAL

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v1.0	27/2/06	06/02/27-01	Final Version	All

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1. INTRODUCTION

1.1 General

This report presents the forecast of annual numbers of instrument flight rules (IFR) movements for 2006 to 2012, prepared by the EUROCONTROL Statistics and Forecast Service (STATFOR) in December 2005-February 2006. This is the final version, following the review by the STATFOR User Group. This replaces the forecast issued in February 2005 (Ref. 1).

This is volume 1 which contains a summary and discussion of the forecast, including annual total forecasts (Annex F), more details for the ESRA (Annex E) and geographical definitions (Annex B, Annex C). The detail for each traffic zone (usually the same as 'State') is in volume 2 (Ref.2).

STATFOR also prepares a short-term forecast (2 years) and a long-term forecast (20 years). Both are available in summary on the STATFOR web pages (Ref.3). In particular, for a State-by-State forecast of 2006, it is recommended to use the short-term forecast.

1.2 Summary of Forecast Method

The EUROCONTROL Medium-Term Forecast grows airport-pair traffic using a model of economic and industry developments. It then calculates overflights based on an assumption of fixed routing as observed in the baseline year.

The medium-term forecast is developed by growing baseline traffic (all IFR flight movements for the whole of 2005) taking into account factors such as **economic growth**, past patterns of **supply**, the growth of **low-cost carriers** and the influence of **high-speed trains**. Two key constraints are:

- It is assumed that **routing** between airport pairs follows the same patterns observed in the baseline year. No account of future route network is made, except in the sensitivity discussion in section 3.3.
- The medium-term forecast is constrained by annual **airport capacities**.

More detail of the method is given in Annex A. The forecast method is the same as in 2005.

Three 'scenarios' are used to capture the likely range of growth of flight movements. They are the low-growth and high-growth scenario which vary economic growth, load factors and other variables in order to capture the most-likely range. The baseline forecast is a guidance figure within this range. The scenarios are detailed in Annex D.

Experience in recent years has shown the need to take the whole forecast range (from low-growth to high-growth) into account. For this new forecast, the main areas of uncertainty are discussed in section 3.2.

2. TRAFFIC GROWTH IN 2005

The main influences on traffic growth in 2005 were:

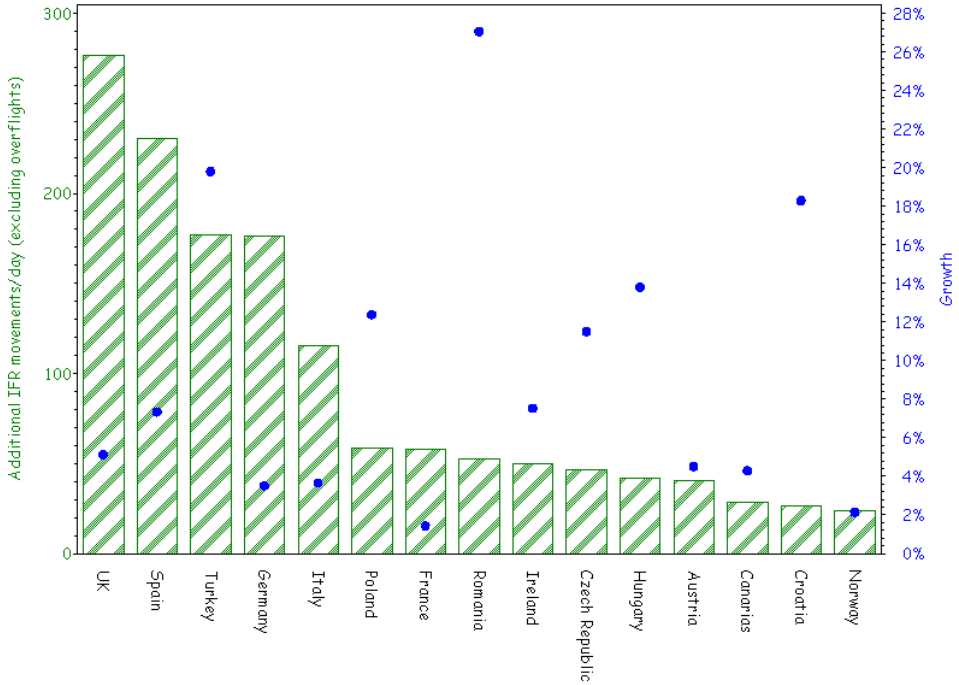
- Economic growth;
- The end of the growth following accession to the EU of 10 new member States (see 3.4);
- The growth of low-cost carriers;
- The strength of the Turkish local market and tourist arrivals in Turkey.

Figure 3 shows which States contributed the greatest number of additional flights to the overall network. The UK, Spain and Germany made a large contribution. Contributing much more than average, for their size, were:

- Turkey, buoyed by local growth and growth as a tourist destination, especially from the UK;
- Poland, and to a lesser extent Czech Republic and Hungary, as a combination of low-cost growth and the effects of EU membership;
- Romania, in anticipation of EU membership in 2007;
- Croatia, with increasing tourist flows in particular.

Figure 3. Main contributors to the traffic network, 2005.

Units: Additional IFR movements/day compared to 2004, overflights excluded.

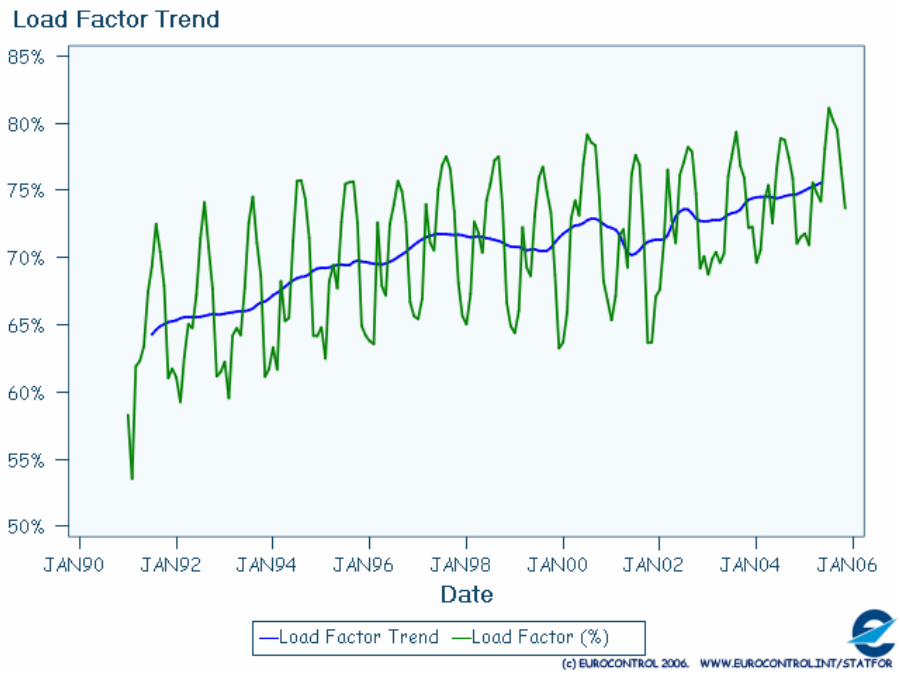


Other factors also played an important, overlapping part. In particular:

- Load factors also continued to climb. Figure 4 presents AEA data that shows load factors in Europe are at a 15-year high. This is good for airlines; many of the flag carriers have seen healthy profits in the last year. But it means that passenger growth is absorbed in fuller flights rather than more flights. So IFR traffic growth is not as fast.

Figure 4. Load factors in Europe continue to grow.

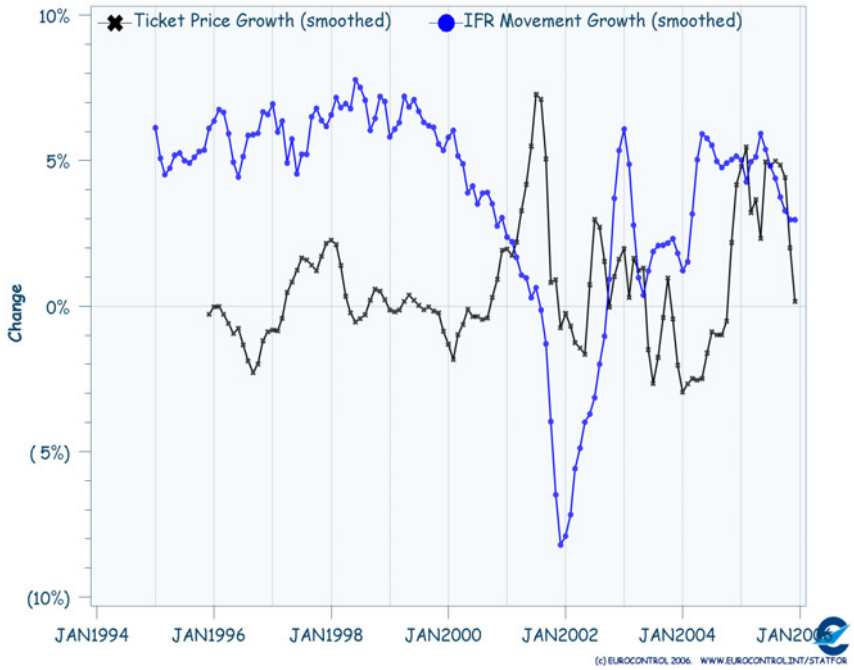
Source: AEA for AEA member airlines, intra-Europe traffic.



- The cost of air travel grew faster than inflation, as the increased cost of fuel led to surcharges or higher fares. Figure 5 shows how ticket price inflation accelerated in late 2004 to a smoothed rate of around 5%. This was followed six months later by a slowing of IFR movement growth from around 6% to closer to 3%.

Figure 5. Slowing of growth in Summer 2005 followed a period of high ticket prices.

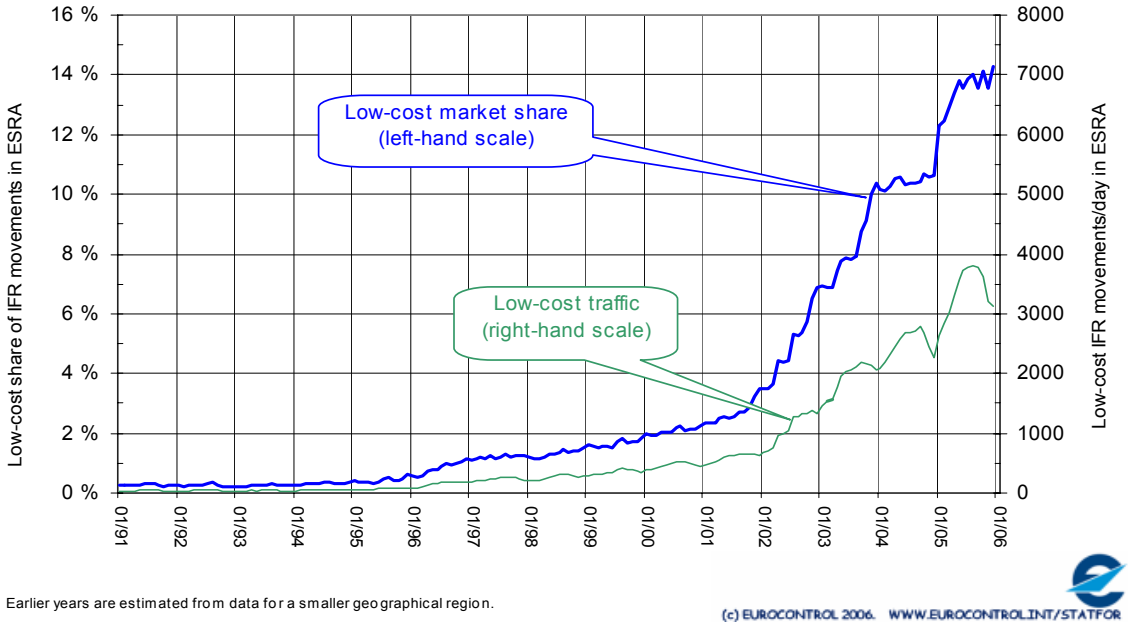
Source: EUROCONTROL IFR flights in ESRA (v. 12 months before); EUROSTAT harmonised index of consumer prices.



- The low-cost carriers continued to extend their market share. Figure 6 shows how market share has grown, together with the number of low-cost movements. It is noticeable as the volume of low-cost flights increases that a seasonal pattern is appearing.

Figure 6. Market share and traffic of the low-cost carriers continues to grow.

Source: EUROCONTROL Statistics (Ref. 6)



Earlier years are estimated from data for a smaller geographical region.

3. GROWTH IN IFR MOVEMENTS TO 2012

3.1 Summary of growth

The forecast is for 11.4 million IFR movements in the ESRA in 2012, 26% (±6%) more than in 2005. This is an average growth of 3.3% per year.

The ESRA is forecast to have 11.4 million IFR movements in 2012, 26% more than in 2005. The low- and high-growth scenarios add ±0.6 million movements to this, which is ±6%. Figure 7 summarises the growth patterns.

Traffic growth is relatively strong at the beginning of the forecast, lifted by the end of the EU Accession effect (the new 10 in 2004 plus Bulgaria and Romania in 2007) and the strength of growth in Turkey, amongst other factors. (See 3.4)

Even at the level of total traffic for the ESRA, the effect of the new runway in Frankfurt is detectable: growth is slower in 2008, and then accelerates as the new runway comes into service in 2009-2010. (See 3.5)

In later years, airport capacities and the expanding high-speed train network have an increasing impact. (See 3.6.)

Growth is not uniform across the region. One result of that is that by 2012 Madrid/Barajas moves to being the third busiest airport in Europe in terms of IFR movements, ahead of London/Heathrow and Amsterdam/Schiphol. For more detail of traffic in each State see Annex F.

Figure 7. Summary of the forecast for the ESRA.

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Annual Average 2012/ 2005
IFR Movements (thousands)	High	.	.	.	9,525	9,961	10,398	10,826	11,217	11,634	12,019	**4.1%**
	Base	8,344	8,745	9,087	9,424	9,759	10,065	10,389	10,738	11,065	11,405	**3.3%**
	Low	.	.	.	9,336	9,589	9,820	10,081	10,375	10,654	10,925	**2.7%**
Growth (compared to previous year)	High		.	.	4.8%	4.6%	4.4%	4.1%	3.6%	3.7%	3.3%	**4.1%**
	Base		4.8%	3.9%	3.7%	3.6%	3.1%	3.2%	3.4%	3.0%	3.1%	**3.3%**
	Low		.	.	2.7%	2.7%	2.4%	2.7%	2.9%	2.7%	2.5%	**2.7%**

3.2 Risks to the Forecast

Users of the forecast are strongly advised to use the forecast range (low-growth to high-growth) as a means to estimate risk. There are a number of other important risks, which this forecast has not included. In particular, changes to the routing of traffic and external events, such as avian influenza should be considered.

The main sources of uncertainty in the forecast are:

- **Network and route changes**. These are discussed in section 3.3, and have often been the source of errors in the forecast. For example, at the time of the forecast, traffic flows were changed as a result of capacity issues in the Czech Republic and Croatia. These changes are not fully represented in the model.
- **Bird flu** is clearly present in Europe, but transmission to humans has so far been limited. The potential impact is very significant, on tourist flows in particular, but the range of possibilities makes inclusion in the forecast impossible.
- **Tourism trends** are quite variable. The medium-term forecast aims to be accurate over the 7-year period, rather than identifying which will be the new holiday "destination of preference" in a given year.
- **Oil Prices** remain changeable, and 2005 demonstrated their significance for traffic growth. This forecast does not assume significant increase, or decrease, in prices.
- **Load factors** were identified as a risk last year, and proved to be significant. Decreases appear less likely than further increases. These possibilities are factored into the forecast. (See D.5)
- **Open skies and other regulations.** Open skies agreements with Morocco, the US and Ukraine all appear possible, but are not factored into the forecast. (See 3.4). Nor are the potential impacts of aviation joining the emissions trading scheme, or other possible tax and regulatory changes.
- **Terrorist attacks, wars and natural disasters.** The last 7 years have not been quiet ones for aviation. There is no reason to believe the next 7 years will be uneventful. The impact on air traffic could be a temporary one, or more significant.
- **Local effects.** Many local changes are significant to particular airports, but less so at the annual, State level. The transfer of DHL operations from Brussels to Leipzig is an example of a change which could be significant at a State level, but has not been incorporated.

3.3 Network and Routing Effects

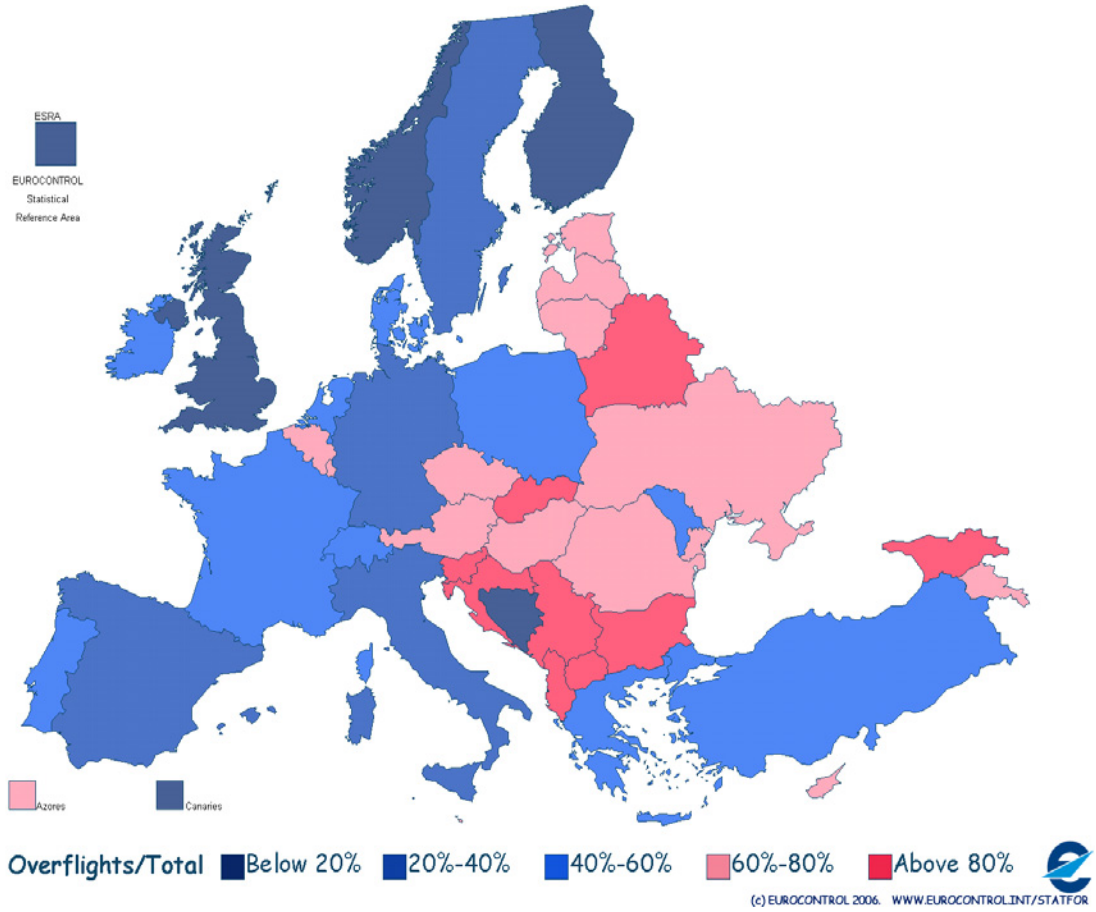
The Medium-Term Forecast assumes that the route network and routing on it do not change from the baseline year (2005) although in fact the route network is continuously evolving. For many States in Europe, most of their traffic is in overflights, and in fact can be quite changeable. However, the sensitivity of the forecast to the future route network is lower than last year as a result of network changes in South-East Europe.

The medium-term forecast is, at its core, an airport-pair forecast. To calculate the overflights, it makes the simplifying assumption that the route network, and the pattern of routing on it do not change from the baseline year (here 2005).

In practice, the network is continually being refined and operators continually adjust how they use the network. For most States in Europe, at least 40% of their traffic is overflights. So the total traffic volumes are sensitive to route changes. Historically, the largest errors in the forecast are often attributable to un-modelled network changes, such as the during the Kosovo crisis in 1999, or Iraq in 2003.

Figure 8. For most States in Europe, 40% or more of their traffic is in overflights.

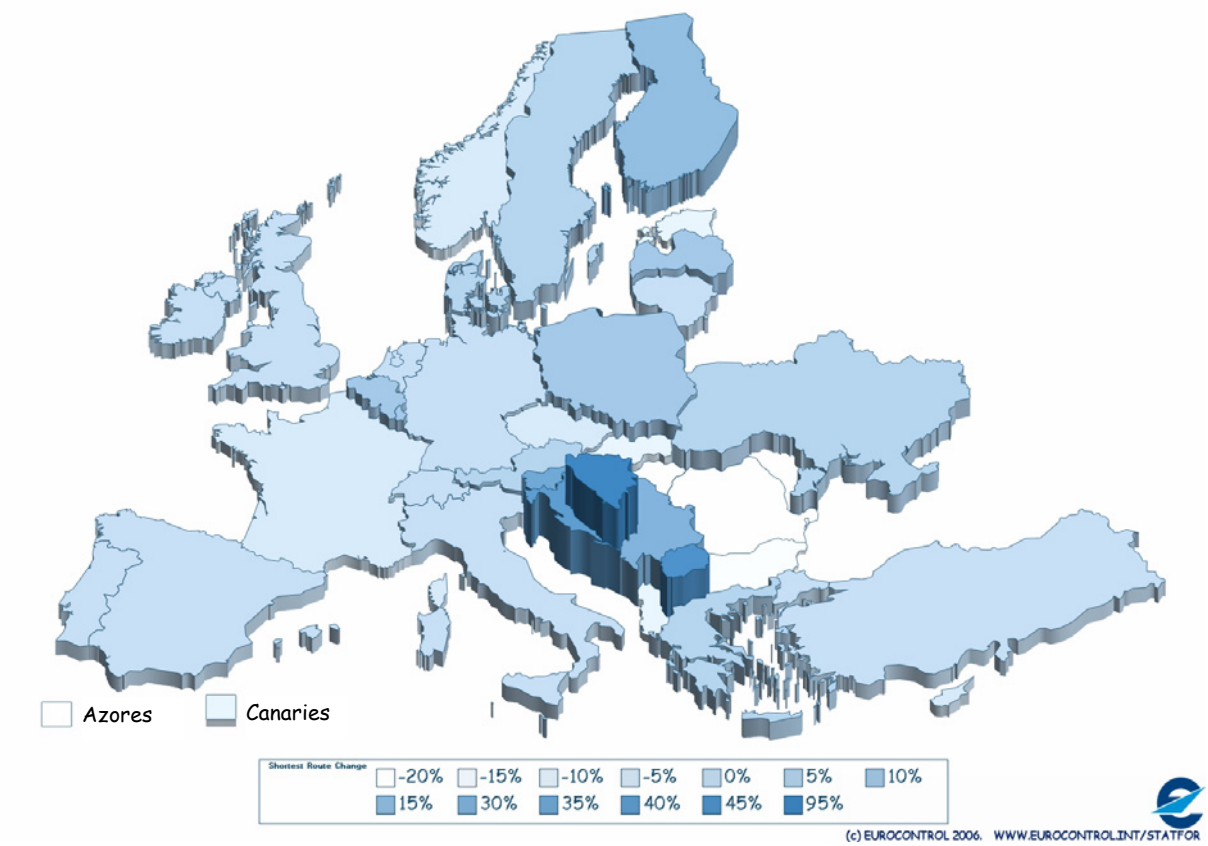
Source: EUROCONTROL Statistics for 2005.



An assessment of the sensitivity of the forecast to a future changed network was conducted by taking the alternative, extreme assumption that all flights took the shortest route between the airports, along a likely future route network with Kosovo airspace open. The results of the sensitivity test are shown in Figure 9. This shows

that traffic is not sensitive to routing in many States in North-West Europe, such as the UK, Sweden, Germany, Spain and Italy. In South-East Europe the situation is different; a North-West to South-East flow shifts southwards. The States formerly in Yugoslavia would gain traffic from a shortest-route scenario, and Hungary-Romania-Bulgaria would lose it. The same pattern was seen last year (Ref. 1, figure 9), and is due mainly to the closure of Kosovo airspace. However, the size of the sensitivity effect is significantly smaller than seen last year (only half as large) because the re-organisation of the South-East Europe network has already led to a gradual shift of this flow southwards. The re-organisation actually took effect at the end of 2003, but its effect was felt gradually during 2004.

Figure 9. Potential net change from shortest routing on a future network.



3.4 Open Skies and Free Trade

The largest effects on traffic of the expansion of the EU are now over. Future membership of Bulgaria and Romania is factored into the forecast. Additional open skies agreements, such as the EU with Morocco, Ukraine and United States are not included in the model and present an upside-risk.

Recent years have seen a number of important developments in air transport regulation.

The biggest impact came to 8 of the 10 States which joined the European Union in May 2004. Joining the EU had the double effect of an immediate liberalisation of air transport, plus free trade and free movement of labour. As a result, there was strong growth in local traffic as airlines expanded rapidly, trying to find the appropriate levels of capacity in the new market conditions. Figure 10 shows how this led in some cases to local[1] traffic volumes 50% higher than 12 months before. It also demonstrates that, for many States, this burst of growth is over, although some are still seeing around 10% growth.

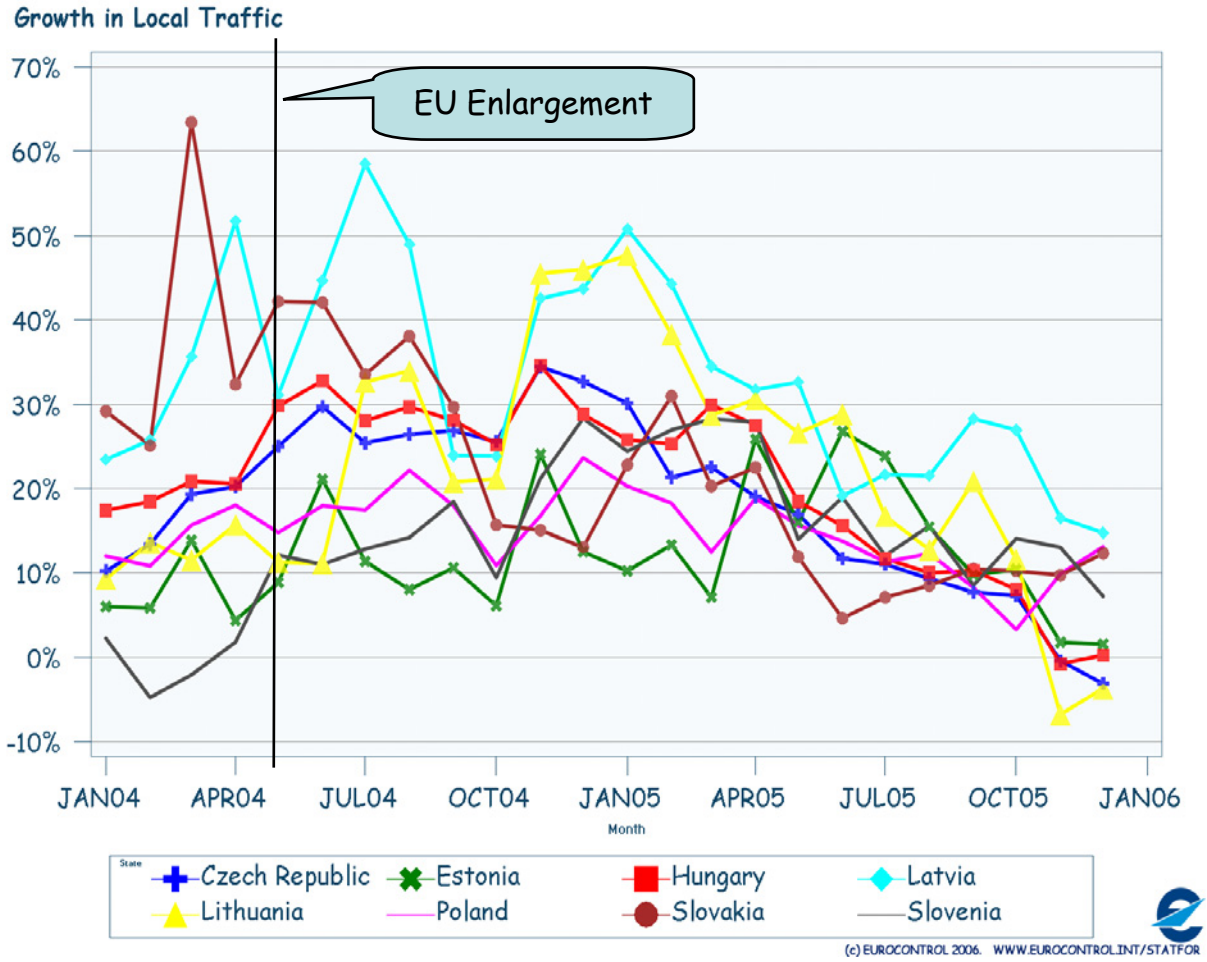
In fact, free movement of labour was initially restricted to Sweden, the UK and Ireland of the old EU15. This restriction ends in April 2006. Some States will extend the restrictions, but others, such as Spain and Finland have announced an end to the restrictions. It is therefore possible that there will be a second phase of growth in traffic between the old EU15 and the new EU10.

Future developments include Bulgaria and Romania joining the EU in 2007 and the open skies agreements between the EU, Morocco, the United States and Ukraine. Recent rapid growth in Romania suggests EU membership is being anticipated, and for both Bulgaria and Romania the effect is built into the forecast (see annex D.6).

For the other agreements, the impact was considered in the long-term forecast (after 2010, Ref. 4), but is not included directly in the medium-term forecast. The effects are not expected to be as large as EU membership, since they are not coupled with free trade and free movement. However, based on work conducted in preparing the last long-term forecast, an additional 5-8% of IFR movements could be generated over a few years by such measures. This is therefore an upward risk on the medium-term forecast.

[1] i.e. excluding overflights

Figure 10. The main effects of EU Accession on traffic are over.



3.5 Airport constraints

Slower growth and revised airport capacities have reduced the impact of airport constraints to a total of around 130,000 IFR departures (1% off total growth over 7 years). With recent strong growth forecast to continue, Istanbul will join the list of capacity-constrained airports in around 2010.

For this forecast, the airport capacities for several UK airports, and for Paris/Charles de Gaulle have been revised upwards on the advice of the STATFOR User Group. In both cases, the revisions had more to do with the difficulties of giving annual capacity figures in a manner that could be used in the model than to changes in capacity plans at the airport.

As a result of this and because of the lower growth in 2005-2006, in the baseline and high-growth scenarios the impact is about 25% less than in previous forecasts: around 130,000 IFR departures in 2012 for the baseline. That is 1% off total growth over 7 years. In the low-growth scenario, the impact of airport constraints is larger in the previous forecast,

Istanbul/Ataturk has been growing rapidly in recent years: 15-20% growth in both 2004 and 2005. The combination of this recent growth, and the continuing strength of growth trends in Turkey means that, around 2010, Istanbul will join the limited number of airports where capacity is restricting growth. Indeed, after the opening of the new runway in Frankfurt in 2009-2010, the most constrained airports are London/Heathrow, Istanbul and London/Gatwick.

Figure 11. Impact of airport constraints.

Units: Reduction in IFR departures.

	Change in IFR Departures (000s)							Percentage Change						
	2006	2007	2008	2009	2010	2011	2012	2006	2007	2008	2009	2010	2011	2012
High	13.7	51.2	61.5	85.0	137.3	152.6	233.1	0%	0%	1%	1%	1%	1%	2%
Base	10.3	35.4	70.4	78.2	76.4	96.5	133.8	0%	0%	1%	1%	1%	1%	1%
Low	8.5	18.9	39.3	58.5	64.1	85.8	114.9	0%	0%	0%	1%	1%	1%	1%

3.6 High-Speed Train

The high-speed train network reduces growth in traffic by about 80,000 IFR movements (1%) in total over 7 years. Spain and Italy see the largest reductions, about 4% and 2% respectively.

Figure 12 summarises the number of IFR departures that are lost to rail because of improvements in the high-speed train (HST) network. The effect is around 1% in total over the 7 years of the forecast.

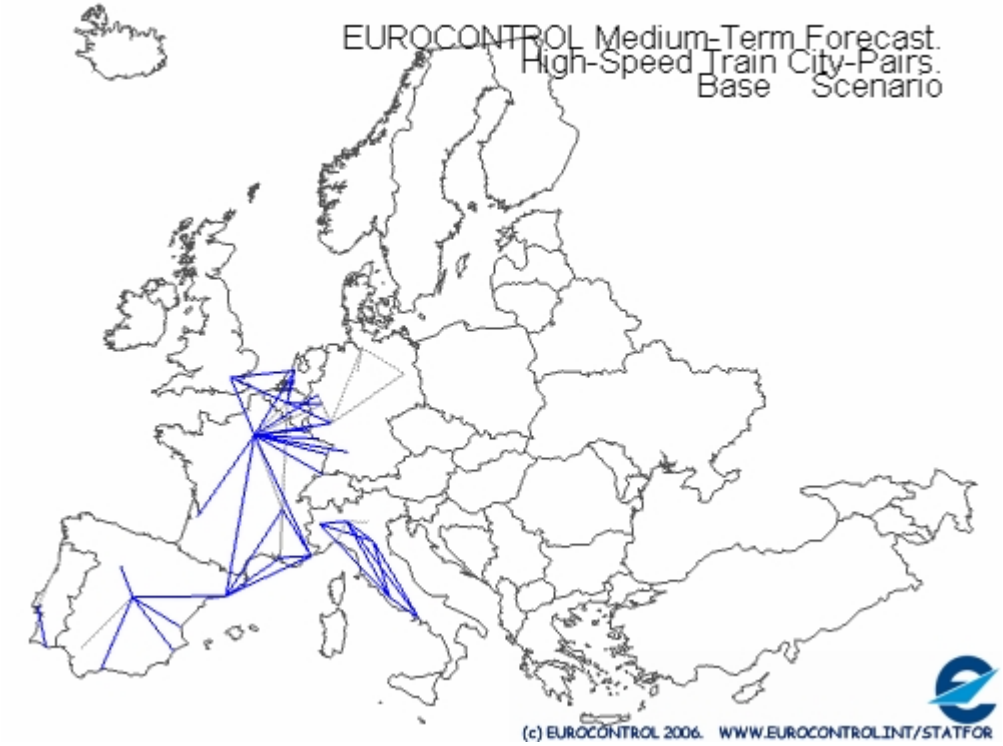
Figure 12, Effect of high-speed train: reduction in IFR *departures*.

	Change in IFR Departures (000s)							Percentage Change						
	2006	2007	2008	2009	2010	2011	2012	2006	2007	2008	2009	2010	2011	2012
High	.	.	1.5	18.6	39.1	40.6	30.9	.	.	0%	0%	0%	0%	0%
Base	.	13.1	32.8	61.9	67.7	84.1	80.4	.	0%	0%	1%	1%	1%	1%
Low	6.5	33.1	60.2	77.2	87.0	89.2	90.5	0%	0%	1%	1%	1%	1%	1%

Spain sees the largest impact from HST: a reduction of about 45,000 IFR departures (4%). Italy and France both have around 14,000 fewer IFR departures, which is a 2% reduction for Italy, 1% for France. Figure 13 shows the network that is used in the baseline scenario. It does not include the trans-Alpine link currently under discussion, so the main impact is in domestic traffic, especially on the busy Madrid-Barcelona route.

In the low-growth scenario, which has the most rapid growth of the HST network, the impact of HST is nearly as large as the impact of airport constraints.

Figure 13. High-Speed Train City-Pairs Baseline Scenario
Source: Actual data from on-line timetables. Plans from Union Internationale des Chemins de Fer.
Comments: Dotted/Grey means unchanged since 2005.



3.7 Comparison with earlier forecasts

The new medium-term forecast reaches the equivalent traffic volumes three years after the dates forecasted just before 11/9/01. It has less growth than the 2005 medium-term forecast, because of slow 2005-2006 growth, weaker economic forecasts and other factors.

Figure 14 shows the new forecast for the ESRA as a whole, together with the low- and high-growth scenarios. So, by 2012, the forecast is approximately 11.5 Million (±0.5Million) IFR Flights.

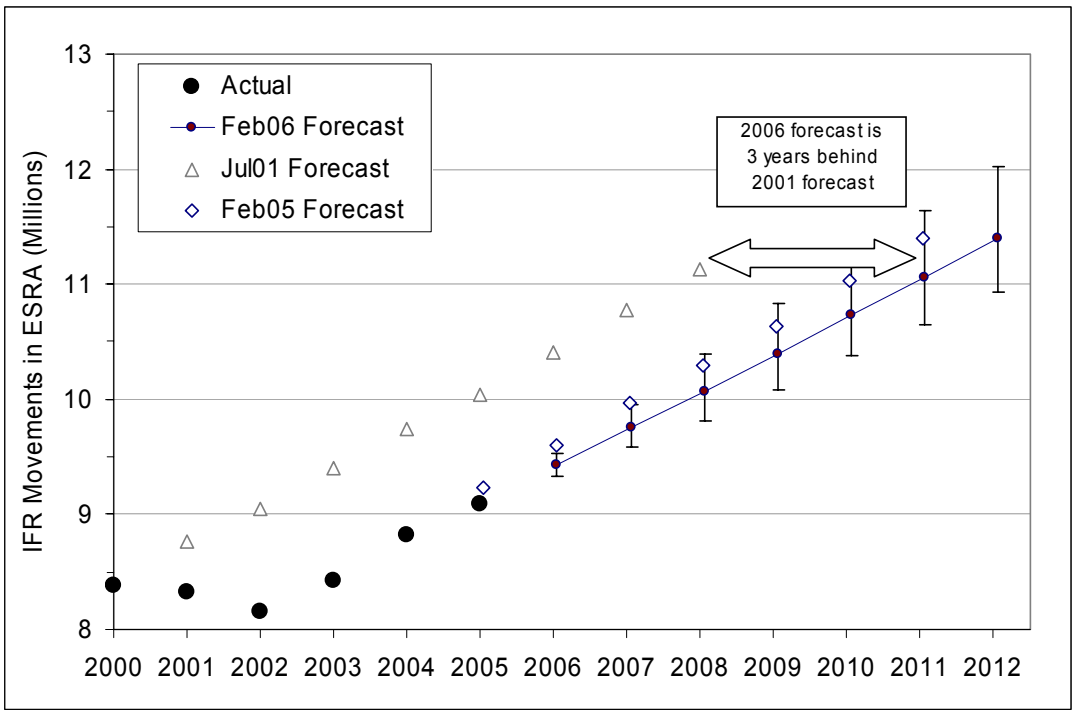
For comparison, the last forecast made just before 11.9.2001 is also shown. In 2001-2002 there was much discussion of whether traffic would bounce back to the pre-9/11 trend line, or just resume the same rate of growth from a lower level. In the figure, there is little 'bounce-back' in evidence. The trend is also for slightly slower growth.

Figure 14 also shows that the new forecast has less traffic (+3.3%/year) than the forecast published in 2005 (+3.7%/year). The reasons for this are:

- About half of the difference is due to 2005 having less growth than forecasted, together with expectations of slower growth in 2006 as effects such as EU Accession have declined rapidly.
- About a quarter is due to economic forecasts which are for several large States 0.1-0.2% lower on average in the later years.
- The remainder is a mixture of small effects, including the impact of HST on some airport pairs.

Compared to other forecasts, this new medium-term forecast lies mid-way between the forecasts published in 2003 and in 2004.

Figure 14. This forecast for the ESRA is 3 years behind the pre-9/11 forecast.



4. GLOSSARY

ACC	Area Control Centre
AEA	Association of European Airlines
B	(in tables) Baseline Scenario
CFMU	Eurocontrol Central Flow Management Unit
CRCO	Eurocontrol Central Route Charges Office
EC	European Commission
ESRA	Eurocontrol Statistical Reference Area (see Annex B)
Euro 88	States and regions in the CRCO area in 1988[2].
FIR	Flight Information Region
GDP	gross domestic product
H	(in tables) High-Growth Scenario
HST	high-speed train
IMF	International Monetary Fund
IFR	instrument flight rules
L	(in tables) Low-Growth Scenario
MTF	Medium-Term Forecast
OAG	Official Airline Guide
OECD	Organisation for Economic Cooperation and Development
STATFOR	Eurocontrol Statistics and Forecast Service
STF	Short-Term Forecast
TR	Traffic Region (a grouping of TZs)
TZ	Traffic Zone (≈State, except for Spain, Portugal, Belgium and Luxembourg)
UIR	Upper Flight Information Region

Detailed explanations of the above terms are available in EUROCONTROL Glossary for Flight Statistics & Forecasts (Ref.5).

[2] Austria, Belgium, Canary Islands, France, Germany, Ireland, Lisbon FIR, Luxembourg, Netherlands, Santa Maria FIR, Spain, Switzerland, UK

ANNEX A. FORECAST METHOD

The EUROCONTROL Medium-Term Forecast grows airport-pair traffic using a model of economic and industry developments. It then calculates overflights based on an assumption of fixed routing as observed in the baseline year.

STATFOR produces medium-term (seven years ahead) forecasts of annual numbers of IFR flight movements for 42 different traffic zones. 'Traffic Zones' are typically States, but Spain and Portugal are split into two, and Belgium and Luxembourg are combined. For each traffic zone, forecasts are given separately for region-to-region flows (Annex C defines these traffic regions). Traffic flows are also categorised as internals (within the traffic zone), arrival in or departure from the traffic zone, and overflights (neither departing from nor landing in the traffic zone, but passing through its airspace).

The forecast is published annually, at the beginning of the year to align with the capacity planning process. The forecast this year is the third annual forecast based on a revised method, which has been introduced to improve the quality, scope, flexibility and efficiency of the forecasts. Key features of the method are:

- Development of a core, **airport-pair forecast**. Several forecasts can be published which are views of this single forecast (eg by zone-pair, or by region);
- A **supply-side model** is used to forecast growth on airport pairs, if this gives better results than the traditional demand-side model;
- The **demand-side model** is simplified to focus on economic growth, with revised elasticities. Some other variables, for which data were not available, have been suppressed.

Other changes include:

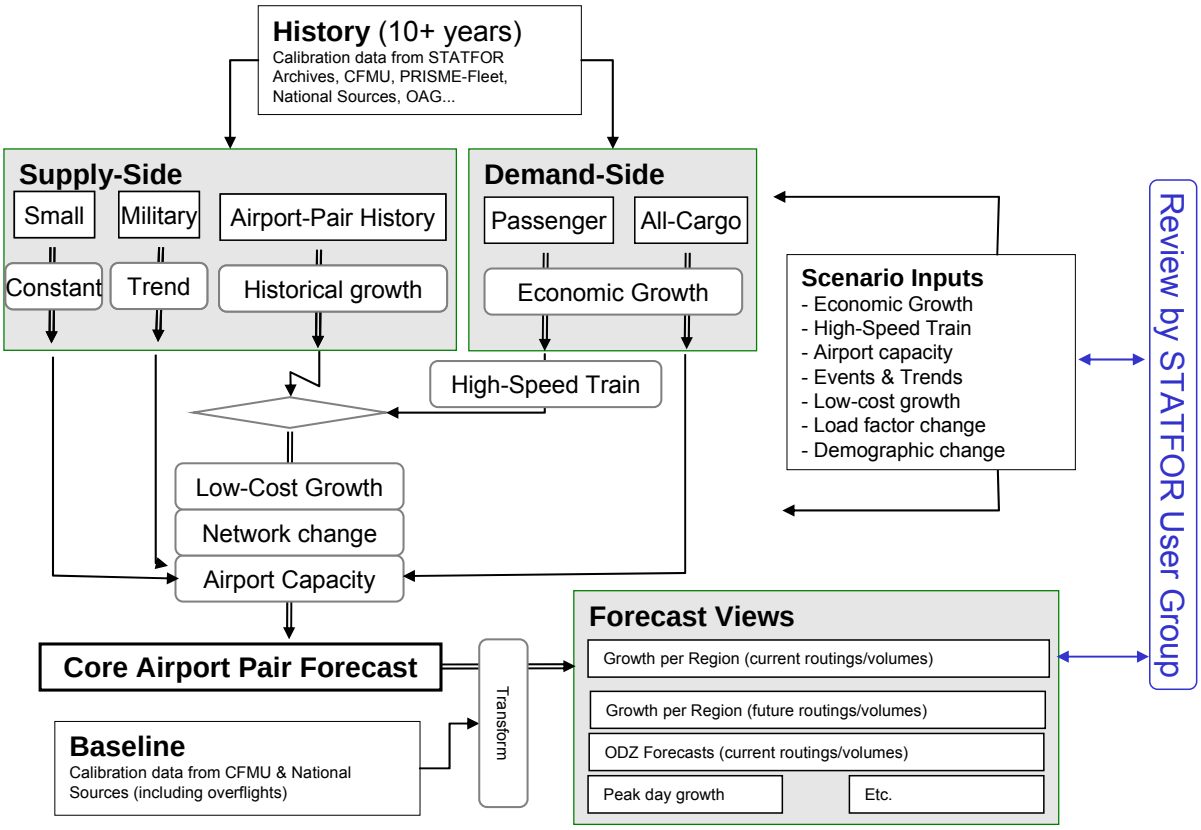
- More flexibility in defining airport capacities, load factors, and high-speed train links;
- An explicit low-cost growth model;
- An explicit 'network-change' model, to allow adjustments for one-off events (eg EU Accession), or lasting effects (eg consolidation);
- The supply-side model uses historical data to model airport-pair trends.

The medium-term forecast is complemented in the first two years with the trends from the short-term forecast. See annex D.6 for the adjustments used to align the medium-term forecast with the short-term.

The new process is summarised in Figure 15.

The review body for STATFOR is the STATFOR User Group. This has members from civil aviation authorities and air navigation service providers, and from other industry organisations. Participants are typically actively involved in statistics or forecasting. The STATFOR User Group meets once or twice per year. It reviews the inputs to the medium-term forecast and the resulting draft forecast. The aim of the review process is to produce a forecast which is consistent on a European level and acceptable to member States. This does not necessarily mean the forecast is *the same* as that produced nationally.

Figure 15. Preparation process of the Medium-Term Forecast



The forecast is built from three main datasets.

- A historical database of the STATFOR monthly statistics (derived from CRCO, CFMU and National sources) for the last ten years at airport-pair level;
- A baseline from CFMU and National sources that includes routing information;
- The set of scenario inputs.

The Medium-Term Forecast uses three scenarios which differ in terms of the assumptions. The low-growth and high-growth scenarios between them capture the most-likely range of future growth in flight movements; the baseline scenario indicates a likely position within this range. The main parts of the scenario data are:

- Economic growth, summarised as GDP growth forecasts in real prices in local currency; (Annex D.1)
- Low-cost growth, which adds additional flight movements, on top of economic growth to reflect new flight movements generated by low-cost airlines; (Annex D.2)
- High-speed train network, summarised as changes in rail travel time on city pairs served by high-speed links, compared to the baseline year; (Annex D.3)
- Airport capacity, in movements per year for major airports; (Annex D.4)
- Load factors, which are assumed to change linearly from a current level to a future level that can vary with region and scenario; (Annex D.5)
- Network change, a percentage adjustment to arrival and departure movements per traffic zone, which can be used - given supporting data - to represent in the model the effects of consolidation, irregularities in the baseline, or local one-off effects,

identified using the short-term forecast. (annex D.6)

- Demographic change, which has a very small impact in the demand-side model. These data are derived from UN population forecasts.

The main result of the medium-term forecasts is a 'core' airport-pair forecast. The published forecast is derived from this.

Each airport pair is grown as follows:

- If supply-side behaviour matches one of the standard histories (ie stable growth of flight movements or a direct relationship to GDP, other supply patterns were not found to produce as good results), then this is used. This approach is used for about 30% of the airport pairs.
- Otherwise, (about 70% of busy, commercial airport pairs) a demand-side approach is used:
- Passenger numbers are calculated from aircraft type and load factors, grown according to GDP growth and the elasticity for this region-pair, then converted back to a number of flights;
- All-cargo flights are grown based on GDP growth;
- Small airport pairs (< 25 flights per year) are kept constant;
- Growth of military flight movements follows the average of recent years for the traffic zone as a whole, with a maximum change of 5%.
- The growth of movements on airport-pair may then be reduced if there has been a reduction in journey times by HST since the baseline year, adjusted for low-cost growth in the traffic zone and for any network change assumptions (by traffic zone, airport, or airport pair) and capped by airport capacity.
- The resulting growth per airport pair is applied to the baseline to create the usual view, including overflights.

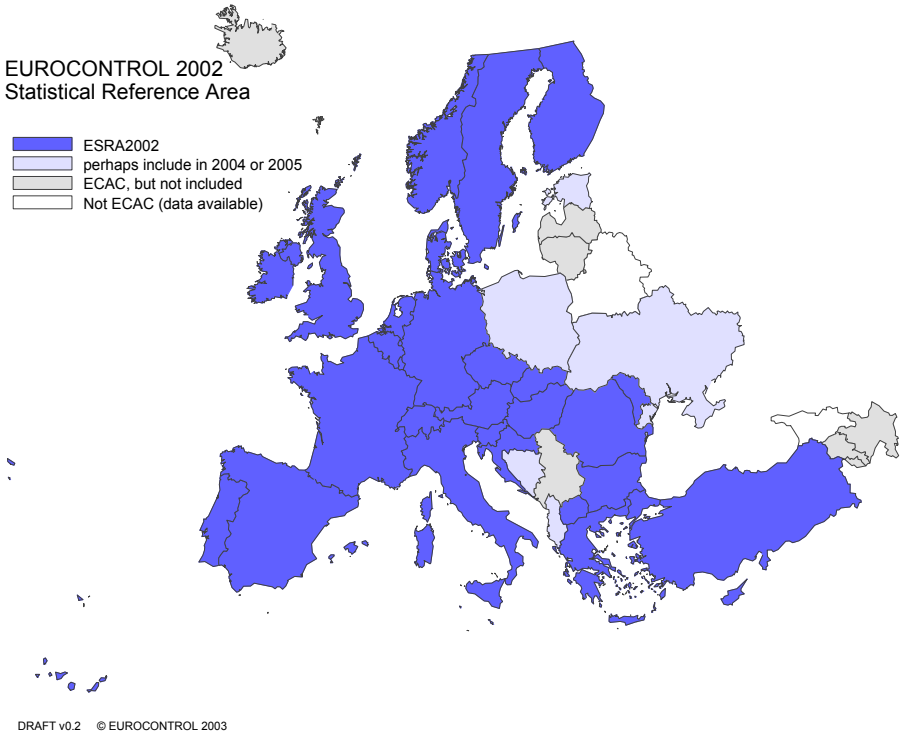
At each stage, the results are validated using any available data, such as from the STATFOR User Group or from the Industry Monitor. For example: base-year airport movements are compared with statistics published by airports; first-year growth is compared with known airline plans; the first two years are compared to the short-term forecast; long-term growth is compared with other forecasts in terms of flights or passengers. Such comparisons are typically a matter of judgement, rather than a precise numerical correlation.

ANNEX B. EUROCONTROL STATISTICAL REFERENCE AREA (ESRA)

The EUROCONTROL Statistical Reference Area (ESRA), is designed to include as much as possible of the ECAC area for which data are available from a range of sources within the Agency (CRCO, CFMU and STATFOR) sources. It is used for high-level reports from the Agency, when referring to 'total Europe'. The ESRA changes only rarely; a region will not be added to the ESRA until there is at least a full year's data from all sources, so that growth calculations are possible. The current ESRA is really 'ESRA2002', meaning that data are available for the total region from the beginning of 2002. Data for the ESRA from earlier years are estimates.

The regions of ESRA are illustrated in this map. The ESRA itself is the dark region. For information, in lighter blue are the regions that might be added to the ESRA in the next few years. The other two shadings indicate regions falling outside the ESRA: either they are within ECAC, but data are not available from all sources; or they are outside ECAC, even if data might be available. Note that the EUROCONTROL forecast includes regions outside of the ESRA (eg Ukraine and Georgia).

Figure 16. The EUROCONTROL Statistical Reference Area.



The regions may be taken as referring to FIRs and UIRs or the airspace volumes of ACCs and other control centres. In the medium-term forecast, traffic zones are represented by an aggregate of FIRs & UIR of States. These do not take delegation of airspace into account. The differences between charging areas and ACCs can have a big impact on overflight counts (and thus on total counts where the total is dominated by overflights). For the ESRA as a whole, there is only a small proportion of overflights, so that the difference between and FIR and an ACC definition is small.

ANNEX C. TRAFFIC REGION DEFINITIONS

For this forecast, traffic flows are described as being to or from one of a number of traffic regions listed in Figure 17 (for example in Figure 26). Each region is made up of a number of traffic zones. Traffic zones are indicated in the table for brevity by the first letters of the ICAO location codes.

The traffic regions are defined for statistical convenience and do not reflect an official position of the EUROCONTROL Agency.

The ESRA was defined in the previous section. For flow purposes, this is split into a "North-West" region mostly of mature air traffic markets, a "Mediterranean" region stretching from the Canaries to Turkey and with a significant tourist element, and an Eastern region.

There are a number of States, including recent EU Members which are not yet in the ESRA and therefore are in the 'Other region'. These include Poland and the Baltic States, Serbia & Montenegro, Albania and Bosnia.

The Former CIS Region includes the Ukraine (a member of EUROCONTROL) and Armenia and Azerbaijan (members of ECAC). In time these will join the ESRA.

Figure 17. Regions used in flow statistics

		ICAO region/country
ESRA		
Eur1	ESRA North-West	LO EB EL EK EF LF ED ET EI EH EN ES LS EG LN
Eur2	ESRA Mediterranean	LP LE LI LG LT GC LM LC
Eur3	ESRA East	LK LZ LJ LH LR LB LU LD LW
World 1	North Atlantic	K, C, B + PA, PO, PF, PP
World 2	Middle-East	O+LL+LV
World 3	North-Africa	DA, HE, HL, GM, HS, DT
World 4	Southern Africa	G; D; H; F (except DA, HE, HL, GM, GE, HS, DT and ESRA (GC))
World 5	Far-East	V, Z, R, W (except ZZZZ)
World 6	Oceania	A, P, Y, N (except AFIL, PA, PO, PF, PP)
World 7	Mid-Atlantic	M; T
World 8	South-Atlantic	S
World 9	Former CIS Region	U (except areas in ESRA)
Other	Other	The rest (includes States not yet in ESRA, eg EP; ZZZZ, AFIL, 0… (ie zero); EKVG; GE.., LX.. etc)

ANNEX D. SUMMARY OF FORECAST ASSUMPTIONS

D.1 Economic Growth

For reference, the economic growth inputs are summarised in Figure 18. For the first time, these all come from a single coherent source: they are supplied by Oxford Economic Forecasting Ltd. Perhaps as a result, some of the forecasts for later years are lower than in the previous estimates.

The low- and high-growth scenarios are developed as variations around these forecasts. The variation is wider in the first three years, because after this the errors in forecasts begin to cancel out. The variation is also wider for economies with GDP smaller than €100Bn in 2005.

Figure 18. GDP Growth by Traffic Zone

Source: Actual data from STATFOR records. Forecasts from Oxford Economic Forecasting Ltd, Dec05.
Comments: Real GDP Growth in local currency.
Units: Growth per year. Data last updated: 14/12/2005

	Actual		Base							
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Albania	6.0%	5.5%	6.0%	5.9%	5.9%	5.6%	4.7%	4.5%	4.5%	4.5%
Armenia	.	.	8.0%	6.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Austria	0.8%	1.8%	2.6%	3.1%	3.3%	3.7%	3.5%	3.6%	3.6%	3.6%
Azerbaijan	9.8%	9.9%	19%	27%	22%	15%	7.0%	6.0%	6.0%	5.0%
Belarus	4.0%	10%	7.1%	4.2%	4.8%	4.5%	4.3%	4.2%	4.2%	4.2%
Belgium/Luxembourg	0.8%	2.6%	1.4%	1.7%	2.1%	2.3%	1.9%	2.0%	2.0%	2.0%
Bosnia-Herzegovina	3.3%	5.0%	5.4%	5.7%	4.8%	4.6%	4.6%	4.0%	4.0%	4.5%
Bulgaria	4.4%	5.0%	6.1%	5.4%	5.0%	4.5%	4.0%	3.7%	3.4%	3.2%
Croatia	5.0%	3.8%	3.5%	3.7%	4.0%	3.9%	3.9%	3.9%	3.9%	3.9%
Cyprus	3.5%	3.6%	3.8%	4.4%	4.4%	4.6%	4.2%	4.0%	4.0%	4.0%
Czech Republic	2.5%	3.8%	4.8%	4.5%	4.7%	4.5%	4.5%	4.5%	4.5%	4.5%
Denmark	0.6%	2.2%	2.2%	2.2%	2.1%	2.2%	2.2%	2.2%	2.3%	2.2%
Estonia	4.8%	5.9%	8.1%	7.1%	6.4%	6.0%	5.8%	5.7%	5.6%	5.5%
FYROM	2.8%	4.0%	3.9%	3.8%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Finland	1.3%	2.9%	1.0%	2.9%	2.7%	2.5%	2.5%	2.5%	2.5%	2.5%
France	0.6%	2.2%	1.4%	1.6%	2.5%	2.2%	2.0%	2.0%	2.0%	2.0%
Georgia	4.8%	8.5%	5.0%	5.0%	5.0%	5.0%	4.5%	4.5%	4.5%	4.5%
Germany	-0.1%	1.7%	0.9%	1.1%	1.7%	1.6%	1.3%	1.3%	1.3%	1.3%
Greece	3.7%	3.8%	3.4%	2.9%	3.1%	3.3%	3.4%	3.3%	3.1%	3.4%
Hungary	2.7%	3.8%	3.9%	4.6%	4.3%	4.9%	4.8%	4.7%	4.7%	4.6%
Ireland	2.5%	4.3%	4.5%	5.0%	4.5%	4.0%	4.0%	4.0%	4.0%	4.0%
Israel	0.7%	3.5%	4.4%	4.2%	3.6%	3.0%	3.0%	3.0%	3.0%	3.0%
Italy	0.4%	1.2%	-0.2%	0.6%	1.8%	2.0%	1.8%	1.8%	1.7%	1.5%

	Actual		Base							
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Latvia	6.2%	7.0%	8.5%	7.4%	7.0%	6.8%	6.8%	6.7%	6.7%	6.6%
Lisbon FIR	-0.4%	1.2%	0.8%	1.8%	2.5%	2.8%	2.5%	2.4%	2.4%	2.4%
Lithuania	6.7%	6.7%	5.8%	6.4%	6.1%	5.8%	5.8%	5.8%	5.7%	5.7%
Malta	2.8%	0.6%	1.6%	1.9%	2.7%	3.2%	3.3%	3.5%	3.5%	3.5%
Moldova	5.5%	3.2%	6.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Netherlands	-0.7%	1.2%	0.6%	1.2%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%
Norway	0.0%	3.4%	2.7%	2.9%	2.7%	2.6%	2.4%	2.2%	2.1%	2.1%
Poland	3.4%	5.7%	3.0%	4.7%	4.0%	4.3%	4.3%	4.3%	4.3%	4.3%
Romania	4.5%	7.0%	5.4%	5.0%	5.4%	4.7%	4.7%	4.7%	4.7%	4.7%
Serbia&Montenegro	4.0%	4.4%	4.0%	4.0%	4.6%	4.5%	4.5%	4.5%	4.5%	4.5%
Slovakia	3.9%	5.1%	4.9%	5.9%	6.3%	4.8%	3.7%	3.7%	3.7%	3.7%
Slovenia	2.8%	3.8%	4.0%	4.0%	3.6%	3.4%	3.4%	3.4%	3.4%	3.4%
Spain	2.3%	2.6%	3.2%	2.8%	3.0%	2.9%	2.8%	2.8%	2.8%	2.8%
Sweden	1.6%	3.4%	2.0%	2.7%	2.7%	2.6%	2.5%	2.5%	2.5%	2.5%
Switzerland	-0.5%	1.8%	1.2%	1.5%	1.8%	1.7%	1.7%	1.7%	1.7%	1.7%
Turkey	5.4%	9.3%	4.6%	5.4%	5.6%	5.2%	5.0%	5.0%	5.0%	5.0%
Ukraine	6.8%	12%	3.1%	5.0%	5.0%	5.0%	5.1%	4.2%	4.2%	4.2%
United Kingdom	2.2%	3.2%	1.7%	2.3%	2.9%	3.1%	2.8%	2.5%	2.5%	2.5%

D.2 Low-Cost Carrier Growth

The low-cost carrier growth model is unchanged from the previous forecast. The starting point is the market share of low-cost carriers in each traffic zone in December 2005. The statistics for low-cost carriers appear in the Low-Cost Market Update (Ref. 6) and the low-cost carriers are defined by means of a list (Ref. 7). This market share is shown in the “2005” column in Figure 19.

The evidence is that low-cost carrier market share growth is partly new, generated traffic (for example attracted by the price), and partly replacement or re-badging of existing traffic. The figure shown for 2012 comprises the growth of market share, reduced by a factor that eliminates the replacement element, and is thus intended to represent the new demand generated by the low-cost carriers.

It does not represent the market share in 2012. Indeed, it is possible that the low-cost market segment will be largely indistinguishable from other short-haul services by then.

Figure 19, Network effects by Traffic Zone

Source: STATFOR Analysis and modelling
Comments: Represents additional growth as a result of Low-Cost
Units: Percentage Additional Growth Due to Low-Cost Growth. Data last updated: 17/01/2006

	Actual	Low	Base	High
	2005	2012	2012	2012
Albania	0%	3%	4%	5%
Armenia	0%	3%	4%	5%
Austria	9%	15%	17%	19%
Belarus	0%	3%	4%	5%
Belgium/Luxembourg	9%	15%	17%	19%
Bosnia-Herzegovina	0%	3%	4%	5%
Bulgaria	2%	9%	10%	12%
Canary Islands	6%	9%	10%	11%
Croatia	5%	8%	9%	10%
Cyprus	0%	11%	14%	17%
Czech Republic	12%	23%	26%	29%
Denmark	6%	12%	14%	16%
Estonia	7%	18%	21%	24%
FYROM	8%	11%	12%	13%
Finland	2%	9%	10%	12%
France	8%	14%	16%	18%
Georgia	1%	4%	5%	6%
Germany	17%	23%	25%	26%
Greece	2%	9%	10%	12%
Hungary	15%	26%	29%	32%
Ireland	41%	52%	55%	58%
Italy	15%	21%	23%	25%
Latvia	16%	27%	30%	33%
Lisbon FIR	10%	16%	18%	20%
Lithuania	4%	15%	18%	21%
Malta	2%	13%	16%	19%
Moldova	0%	3%	4%	5%
Netherlands	13%	19%	21%	23%
Norway	9%	15%	17%	19%
Poland	20%	31%	34%	37%
Romania	4%	10%	12%	14%
Santa Maria FIR	0%	3%	4%	5%
Serbia&Montenegro	3%	6%	7%	8%
Slovakia	41%	52%	55%	58%
Slovenia	4%	15%	18%	21%
Spain	20%	26%	28%	29%
Sweden	16%	22%	24%	25%
Switzerland	12%	18%	20%	22%
Turkey	8%	11%	12%	13%
Ukraine	0%	3%	4%	5%
United Kingdom	30%	33%	37%	39%

D.3 High-Speed Train Network Development

Figure 13 (section 3.6) indicates the city-pairs where there is some improvement in the high-speed rail network between 2005 and 2012. This is based on information provided by the Union Internationale des Chemins de Fer. The model converts improved rail travel times into increased market share for rail, and thus fewer passengers travelling by air.

Figure 20 indicates the changes in rail travel time in the baseline scenario. In the low- and high-growth scenarios, the times remain the same, but they happen earlier and later, respectively. The distance indicated is based on an average location of airports associated with the city, not on city-centre locations.

Figure 20. High-Speed Train Times in the Baseline Scenario

Source: Actual data from on-line timetables. Plans from UIC.
Comments: Refreshed and updated version of inputs used in MTF05.
Units: Travel time (minutes). Data last updated: 09/02/2006 Distances estimated from airport locations.

			Distance	Rail Time (mins)						
			Km	2005	2007	2008	2009	2010	2011	2012
Alicante	Madrid	B	354	220	.	.	.	.	.	130
Bologna	Milan	B	176	98	.	70	.	.	.	.
	Naples	B	473	284	.	190	.	.	.	.
	Rome	B	311	144	.	120	.	.	.	.
	Turin	B	296	176	.	.	125	.	.	.
Barcelona	Lyon	B	545	415	.	.	180	.	.	.
	Madrid	B	492	289	185	.	.	.	.	.
	Marseille	B	350	418	.	.	120	.	.	.
	Nice	B	496	638	.	.	170	.	.	.
	Paris	B	859	725	.	.	280	.	.	.
Berlin	Frankfurt	B	470	243	.	.	.	.	.	.
	Hamburg	B	262	93	.	.	.	.	.	.
Bordeaux	Paris	B	527	183	.	.	.	166	.	.
Brussels	Frankfurt	B	258	210	.	140	.	.	.	.
	Köln/Bonn	B	188	137	.	75	.	.	.	.
	London	B	331	135	.	.	120	.	.	.
	Lyon	B	559	220	.	.	.	.	.	.
	Marseille	B	814	321	.	.	.	.	.	.
	Paris	B	242	85	.	.	.	.	.	.
Düsseldorf	Frankfurt	B	165	115	.	.	.	.	.	.
	Paris	B	398	292	.	.	160	.	.	.
Frankfurt	Hamburg	B	428	216	.	.	.	.	.	.
Hamburg	Hannover	B	131	74	.	.	.	.	.	.
Köln/Bonn	Frankfurt	B	111	69	.	.	.	.	.	.
	Paris	B	397	231	.	.	.	.	.	.

			Distance	Rail Time (mins)					
			Km	2005	2007	2008	2009	2010	2011	2012
Lisbon	Faro	B	220	172	.	.	.	77	.	.
	Porto	B	276	187	.	.	.	.	.	.
London	Paris	B	328	155	.	.	128	.	.	.
Lyon	Marseille	B	255	95	.	.	.	.	.	.
	Nice	B	287	289	.	.	.	.	146	.
	Paris	B	417	115	.	.	.	.	.	.
Madrid	Malaga	B	419	247	.	.	180	.	.	.
	Seville	B	383	140	.	.	.	.	.	.
	Valladolid	B	177	143	.	.	.	70	.	.
	Valencia	B	288	205	.	.	.	86	.	.
Marseille	Nice	B	163	141	.	.	.	.	70	.
Milan	Genova	B	121	92	.	.	.	.	.	.
	Naples	B	638	374	.	240	.	.	.	.
	Rome	B	464	245	.	150	.	.	.	.
	Turin	B	142	82	60	.	.	.	.	.
	Verona	B	114	82	.	.	.	.	.	.
Nice	Paris	B	702	331	.	.	.	.	224	.
Paris	Bale Mulhouse	B	413	297	.	.	150	.	.	.
	Frankfurt	B	413	303	.	.	190	.	.	.
	Karlsruhe	B	.	309	.	.	180	.	.	.
	Luxembourg	B	285	223	.	.	135	.	.	.
	Saarbrucken	B	345	235	.	.	110	.	.	.
	Strasbourg	B	388	238	.	.	140	.	.	.
	Stuttgart	B	502	365	.	.	230	.	.	.
Rome	Naples	B	187	105	60	.	.	.	.	.
	Turin	B	535	365	.	.	230	.	.	.
Amsterdam	Antwerpen	B	126	130	70	.	.	.	.	.
	Brussels	B	174	159	93	.	.	.	.	.
	London	B	345	355	289	.	274	.	.	.
	Paris	B	400	249	183	.	.	.	.	.

D.4 Airport Capacity

Figure 21 summarises the assumptions about annual airport capacity in the baseline scenario. For most airports, the capacities are the same in the other scenarios. For the purposes of this forecast, UK capacities and that of Paris/Charles de Gaulle have been revised upwards on the advice of the STATFOR User Group. These revisions are not the result of extra capacity, but of an attempt to reflect the actual airport capacities more accurately as an annual total of IFR flights.

Figure 21: Airport Capacity – Baseline Scenario

Source: EUROCONTROL Data with contributions from STATFOR User Group members.
Units: Thousands of IFR Movements/Year. Data last updated: 09/02/2006

		2005	2006	2007	2008	2009	2010	2011	2012
EBBR	BRUSSELS NATIONAL	470	.	.	.	.	.	.	.
EDDB	SCHOENEFELD-BERLIN	207	.	.	.	.	.	.	.
EDDC	DRESDEN	255	.	.	.	.	.	.	.
EDDE	ERFURT	153	.	.	.	.	.	.	.
EDDF	FRANKFURT MAIN	530	.	.	.	580	656	.	.
EDDG	MUENSTER-OSNABRUECK	214	.	.	.	.	.	.	.
EDDH	HAMBURG	406	.	.	.	.	.	.	.
EDDI	TEMPELHOF-BERLIN	263	.	.	.	.	.	.	.
EDDK	KOELN-BONN	295	.	.	.	.	.	.	.
EDDL	DUESSELDORF	233	.	.	.	.	.	.	.
EDDM	MUENCHEN 2	550	.	.	.	.	.	.	.
EDDN	NUERNBERG	213	.	.	.	.	.	.	.
EDDP	LEIPZIG/HALLE	237	.	.	.	.	.	.	.
EDDR	SAARBRUCKEN/ENSHEIM	210	.	.	.	.	.	.	.
EDDS	STUTTGART	324	.	.	.	.	.	.	.
EDDT	TEGEL-BERLIN	368	.	.	.	.	.	.	.
EDDV	HANNOVER LANGENHAGEN	449	.	.	.	.	.	.	.
EDDW	BREMEN	253	.	.	.	.	.	.	.
EFHK	HELSINKI-VANTAA	320	.	.	.	.	.	.	.
EGBB	BIRMINGHAM	169	171	174	176	178	180	181	183
EGCC	MANCHESTER	277	280	282	284	286	288	290	292
EGGW	LONDON/LUTON	121	123	124	125	144	158	169	177
EGKK	LONDON/GATWICK	278	280	282	284	285	287	288	289
EGLL	LONDON/HEATHROW	484	486	487	488	490	505	517	525
EGSS	LONDON/STANSTED	252	257	261	265	268	271	274	277
EHAM	SCHIPHOL AMSTERDAM	600	.	.	.	.	.	.	.
EIDW	DUBLIN	300	.	.	.	.	.	.	.
EKCH	COPENHAGEN KASTRUP	600	.	.	.	.	.	.	.
ENGM	OSLO/GARDERMOEN	530	.	.	.	.	.	.	.
ESSA	STOCKHOLM-ARLANDA	370	.	.	.	.	.	.	.
LEBL	BARCELONA	420	.	.	.	.	.	.	.
LEMD	MADRID BARAJAS	500	.	600	650	.	.	.	.
LEPA	PALMA DE MALLORCA	400	.	.	.	.	.	.	.
LFML	MARSEILLE PROVENCE	140	.	.	.	.	.	.	.
LFMN	NICE	220	.	.	.	.	.	.	.
LFPG	PARIS CH DE GAULLE	680	.	.	.	.	.	.	.
LFPO	PARIS ORLY	250	.	.	.	.	.	.	.
LGAV	ATHINAI E. VENIZELOS	260	.	.	.	.	.	.	.
LIMC	MILANO MALPENSA	670	.	.	.	.	.	.	.
LIRF	ROME FIUMICINO	550	.	.	.	.	.	.	.
LOWW	WIEN SCHWECHAT	430	.	.	.	.	.	.	.
LPPT	LISBOA	200	.	.	.	.	.	.	.
LSGG	GENEVE COINTRIN	200	.	.	.	.	.	.	.
LSZH	ZURICH	350	.	.	.	.	.	.	.
LTBA	ISTANBUL-ATATURK	310	.	.	.	.	.	.	.

D.5 Load Factors

Figure 22 summarises the assumptions about future load factors. In the high-growth and baseline scenarios, it is assumed that the relatively strong growth allows airlines to grow their load factors further. In the low-growth scenario, load factors retreat from what in most cases are a peak in 2005, back to 2004 levels.

Figure 22. Load factors by Traffic Region

Source: Actual: AEA, IATA. Forecast: STATFOR analysis and modelling.
Comments: Data for 2005 based on year to November.
Units: Percentage Load Factor for this Traffic Region. Data last updated: 17/02/2006

	Actual						Low	Base	High
	2000	2001	2002	2003	2004	2005	2012	2012	2012
ESRA East	63.6%	62.0%	64.8%	64.7%	66.6%	68.4%	66.6%	69.7%	71.6%
ESRA Mediterranean	63.6%	62.0%	64.8%	64.7%	66.6%	68.4%	66.6%	69.7%	71.6%
ESRA North-West	63.6%	62.0%	64.8%	64.7%	66.6%	68.4%	66.6%	69.7%	71.6%
Far-East	78.4%	76.6%	80.5%	80.5%	78.3%	80.0%	78.3%	83.3%	85.6%
Former CIS Region	74.5%	71.8%	70.6%	70.6%	74.0%	74.0%	74.0%	79.0%	80.9%
Mid-Atlantic	79.6%	79.4%	78.7%	79.5%	80.5%	82.3%	80.5%	85.5%	87.0%
Middle-East	67.4%	63.7%	67.3%	68.9%	70.4%	74.1%	70.4%	72.6%	75.4%
North Atlantic	77.8%	74.3%	80.0%	78.2%	82.3%	83.1%	82.3%	85.1%	87.3%
North-Africa	70.6%	65.8%	68.7%	68.7%	70.2%	67.6%	70.2%	74.5%	75.2%
Oceania	77.8%	74.3%	80.0%	78.2%	82.3%	83.1%	82.3%	85.1%	87.3%
Other	74.5%	71.8%	70.6%	70.6%	74.0%	74.0%	74.0%	79.0%	80.9%
South-Atlantic	79.5%	73.9%	76.1%	81.5%	83.2%	82.8%	83.2%	85.2%	88.2%
Southern Africa	74.4%	77.8%	76.3%	75.7%	77.8%	78.0%	77.8%	82.8%	83.5%

D.6 Events and Trends

'Events and Trends' are used to represent future events, such as EU Accession (Romania & Bulgaria) and the World Cup football (Germany). They are also used to align the medium-term forecast with the short-term forecast. The forecast method means that only the local traffic (excluding overflights) can be adjusted in this way. Figure 23 summarises the events and trends assumptions for this forecast.

Figure 23: Events and Trends assumptions by Traffic Zone

Source: STATFOR analysis and modelling
Units: Percentage adjustment. Data last updated: 17/02/2006

		2006	2007	2008	2009	2010	2011	2012
Belgium/Luxembourg	H	-0.02	-0.01					
	B	-0.02	-0.01					
	L	-0.01						
Bulgaria	H	0.10	0.12	0.06	0.03	0.01	0.01	
	B	0.08	0.11	0.06	0.03	0.01	0.01	
	L	0.08	0.10	0.05	0.02	0.01	0.01	
Croatia	H	0.04	0.01					
	B	0.03	0.01					
Cyprus	B	-0.02	-0.01					
	L	-0.02	-0.01					
Denmark	H	-0.02	-0.01					
	B	-0.02	-0.01					
	L	-0.02	-0.01					
Estonia	H	-0.02	-0.01					
	B	-0.02	-0.01					
	L	-0.02	-0.01					
Germany	H	0.00						
	B	0.00						
	L	0.00						
Greece	B	-0.02	-0.01					
	L	-0.02	-0.01					
Latvia	H	0.01	0.01					
	B	0.01	0.01					
Lisbon FIR	H	0.03	0.01					
	B	0.03	0.01					
	L	0.03	0.01					
Lithuania	B	-0.03	-0.01					
	L	-0.03	-0.01					
Moldova	B	-0.03	-0.01					
	L	-0.03	-0.01					
Poland	H	0.06	0.02					
	B	0.05	0.02					
	L	0.03	0.01					
Romania	H	0.10	0.12	0.06	0.03	0.01	0.01	
	B	0.08	0.11	0.06	0.03	0.01	0.01	
	L	0.08	0.10	0.05	0.02	0.01	0.01	
Slovenia	H	0.06	0.02					
	B	0.05	0.02					
	L	0.03	0.01					
Spain	H	0.02	0.01					
	B	0.02	0.01					
	L	0.02	0.01					
Sweden	H	-0.02	-0.01					
	B	-0.02	-0.01					
	L	-0.02	-0.01					
Turkey	H	0.04	0.02	0.01				
	B	0.04	0.02	0.01				

ANNEX E. SUMMARY OF THE FORECAST FOR THE ESRA

Figure 24. Growth in the ESRA.

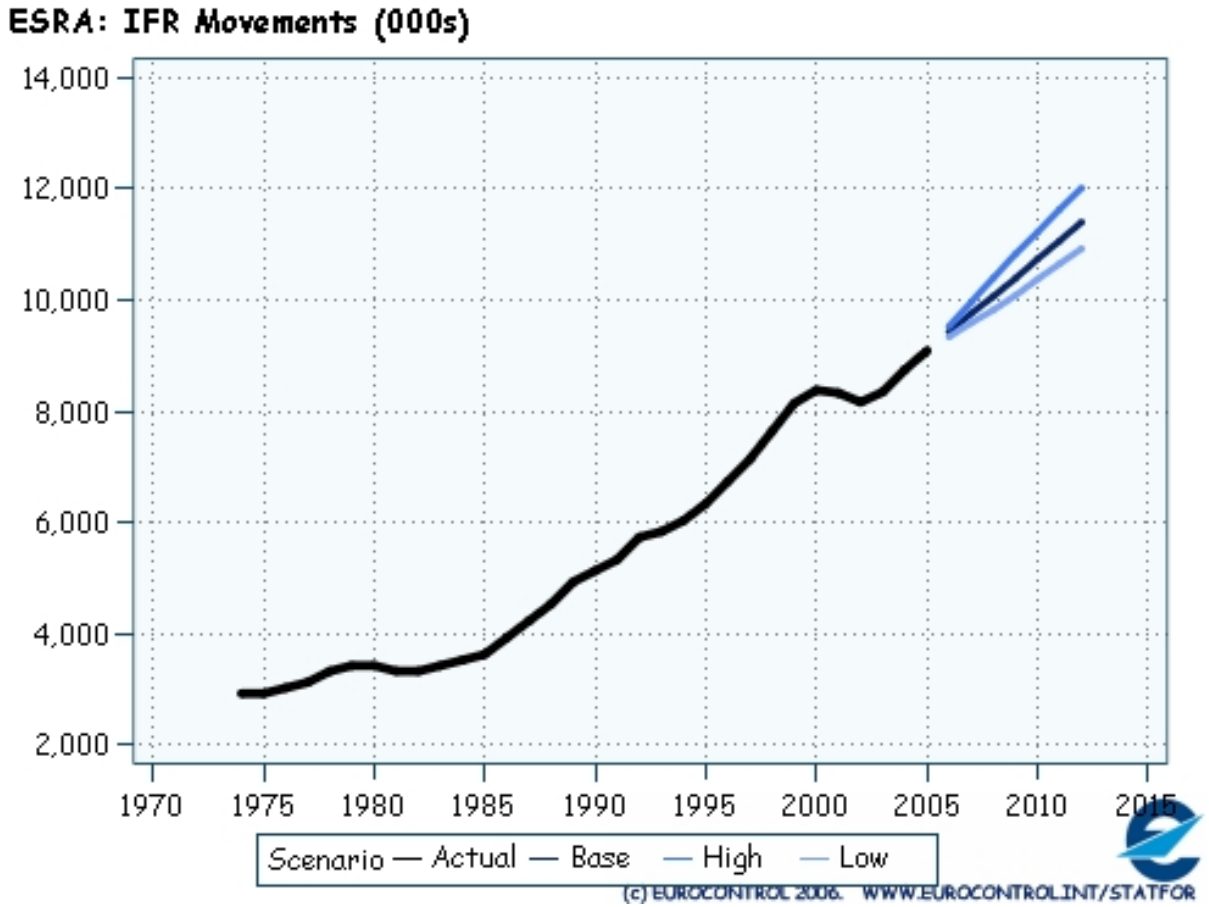


Figure 25. Traffic on the main flow categories for the ESRA.

		IFR Movements(000s)										Growth										2012/ 2005
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Total: Internal	High	.	.	.	7,640	7,963	8,283	8,585	8,858	9,143	9,403	.	.	.	4.4%	4.2%	4.0%	3.6%	3.2%	3.2%	2.8%	**3.6%**
	Base	6,887	7,115	7,320	7,563	7,806	8,026	8,256	8,497	8,726	8,965	.	3.3%	2.9%	3.3%	3.2%	2.8%	2.9%	2.9%	2.7%	2.7%	**2.9%**
	Low	.	.	.	7,495	7,670	7,828	8,011	8,218	8,415	8,606	.	.	.	2.4%	2.3%	2.1%	2.3%	2.6%	2.4%	2.3%	**2.3%**
Total: Arr/Dep	High	.	.	.	1,802	1,909	2,020	2,141	2,253	2,378	2,495	.	.	.	6.7%	6.0%	5.8%	6.0%	5.2%	5.5%	5.0%	**5.7%**
	Base	1,397	1,558	1,689	1,778	1,866	1,948	2,036	2,140	2,232	2,328	.	12%	8.4%	5.3%	4.9%	4.4%	4.5%	5.1%	4.3%	4.3%	**4.7%**
	Low	.	.	.	1,760	1,833	1,902	1,975	2,058	2,135	2,211	.	.	.	4.2%	4.2%	3.8%	3.8%	4.2%	3.7%	3.6%	**3.9%**
Total: Overflight	High	.	.	.	83	88	94	100	106	112	119	.	.	.	7.1%	6.5%	6.3%	6.1%	6.2%	6.0%	6.1%	**6.3%**
	Base	58	71	77	82	87	91	96	101	106	111	.	21%	9.3%	6.0%	5.4%	5.1%	5.2%	5.2%	4.9%	4.9%	**5.2%**
	Low	.	.	.	82	85	89	94	98	102	107	.	.	.	5.3%	4.8%	4.6%	4.7%	4.7%	4.5%	4.5%	**4.7%**
Grand Total	High	.	.	.	9,526	9,961	10,398	10,826	11,217	11,633	12,019	.	.	.	4.8%	4.6%	4.4%	4.1%	3.6%	3.7%	3.3%	**4.1%**
	Base	8,343	8,745	9,087	9,424	9,759	10,065	10,389	10,738	11,065	11,405	.	4.8%	3.9%	3.7%	3.5%	3.1%	3.2%	3.4%	3.0%	3.1%	**3.3%**
	Low	.	.	.	9,337	9,589	9,820	10,081	10,375	10,654	10,925	.	.	.	2.7%	2.7%	2.4%	2.7%	2.9%	2.7%	2.5%	**2.7%**

Source: Airport Pair Forecast dated: 17FEB06.

Figure 26. Traffic and growth on the biggest region-to-region flows through the ESRA.

				IFR Movements(000s)										Growth										2012/ 2005
				2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
1	ESRA North-West	ESRA North-West	H	.	.	.	3977.6	4075.8	4183.6	4299.7	4405.6	4508.9	4598.5	.	.	.	2.6%	2.5%	2.6%	2.8%	2.5%	2.3%	2.0%	**2.5%**
			B	3817.4	3868.0	3877.8	3951.4	4027.9	4103.8	4184.3	4275.9	4362.1	4449.8	.	1.3%	0.3%	1.9%	1.9%	1.9%	2.0%	2.2%	2.0%	2.0%	**2.0%**
			L	.	.	.	3928.8	3981.0	4034.1	4095.1	4164.7	4230.6	4297.3	.	.	.	1.3%	1.3%	1.3%	1.5%	1.7%	1.6%	1.6%	**1.5%**
2	ESRA Mediterranean	ESRA North-West	H	.	.	.	1649.5	1723.6	1792.9	1861.8	1922.9	1984.9	2040.2	.	.	.	5.1%	4.5%	4.0%	3.8%	3.3%	3.2%	2.8%	**3.8%**
			B	1457.5	1510.0	1570.1	1630.8	1689.9	1741.5	1791.8	1846.2	1896.9	1949.3	.	3.6%	4.0%	3.9%	3.6%	3.1%	2.9%	3.0%	2.7%	2.8%	**3.1%**
			L	.	.	.	1613.4	1659.6	1696.4	1736.2	1783.2	1827.0	1867.7	.	.	.	2.8%	2.9%	2.2%	2.3%	2.7%	2.5%	2.2%	**2.5%**
3	ESRA Mediterranean	ESRA Mediterranean	H	.	.	.	1483.8	1575.7	1664.4	1729.9	1786.4	1853.8	1917.1	.	.	.	6.4%	6.2%	5.6%	3.9%	3.3%	3.8%	3.4%	**4.6%**
			B	1267.2	1330.3	1395.0	1464.0	1524.2	1575.6	1635.6	1688.5	1741.9	1800.5	.	5.0%	4.9%	4.9%	4.1%	3.4%	3.8%	3.2%	3.2%	3.4%	**3.7%**
			L	.	.	.	1442.8	1480.1	1513.3	1563.6	1619.4	1674.7	1726.5	.	.	.	3.4%	2.6%	2.2%	3.3%	3.6%	3.4%	3.1%	**3.1%**
4	ESRA North-West	North Atlantic	H	.	.	.	326.3	337.9	351.4	368.0	382.9	399.7	413.7	.	.	.	4.1%	3.5%	4.0%	4.7%	4.1%	4.4%	3.5%	**4.0%**
			B	285.9	299.7	313.5	323.6	333.8	342.5	353.3	368.3	380.7	393.0	.	4.8%	4.6%	3.2%	3.1%	2.6%	3.1%	4.3%	3.4%	3.2%	**3.3%**
			L	.	.	.	321.4	330.2	337.6	345.6	355.0	363.2	371.4	.	.	.	2.5%	2.7%	2.2%	2.3%	2.7%	2.3%	2.3%	**2.5%**
5	ESRA East	ESRA North-West	H	.	.	.	320.7	347.9	372.9	398.2	421.7	447.5	471.7	.	.	.	8.8%	8.5%	7.2%	6.8%	5.9%	6.1%	5.4%	**6.9%**
			B	203.1	249.4	294.9	314.5	336.6	355.5	374.1	395.0	414.2	433.8	.	23%	18%	6.7%	7.0%	5.6%	5.2%	5.6%	4.9%	4.7%	**5.7%**
			L	.	.	.	310.9	329.6	345.5	360.7	377.2	392.4	407.8	.	.	.	5.4%	6.0%	4.8%	4.4%	4.6%	4.0%	3.9%	**4.7%**
6	ESRA North-West	Other	H	.	.	.	236.0	252.8	268.8	286.8	303.9	323.1	341.5	.	.	.	9.3%	7.1%	6.3%	6.7%	6.0%	6.3%	5.7%	**6.8%**
			B	151.9	184.9	216.0	230.7	243.8	255.5	268.2	283.1	296.9	311.3	.	22%	17%	6.8%	5.7%	4.8%	5.0%	5.5%	4.9%	4.9%	**5.4%**
			L	.	.	.	226.6	236.6	246.2	256.8	268.7	279.8	291.5	.	.	.	4.9%	4.4%	4.1%	4.3%	4.6%	4.2%	4.2%	**4.4%**
7	ESRA North-West	North-Africa	H	.	.	.	186.3	195.9	204.7	214.9	225.1	236.3	247.3	.	.	.	5.5%	5.2%	4.5%	5.0%	4.8%	5.0%	4.6%	**4.9%**
			B	142.8	161.4	176.6	184.1	191.6	198.8	205.9	215.1	223.3	231.9	.	13%	9.4%	4.2%	4.1%	3.7%	3.6%	4.5%	3.8%	3.8%	**4.0%**
			L	.	.	.	183.1	189.9	196.5	202.6	210.3	217.6	224.9	.	.	.	3.7%	3.7%	3.5%	3.1%	3.8%	3.5%	3.4%	**3.5%**
8	ESRA North-West	Middle-East	H	.	.	.	141.8	148.2	155.5	164.5	172.6	182.2	190.2	.	.	.	4.9%	4.5%	4.9%	5.8%	4.9%	5.5%	4.4%	**5.0%**
			B	110.4	125.6	135.2	140.6	146.1	151.3	157.6	166.1	173.3	180.7	.	14%	7.6%	4.0%	3.9%	3.5%	4.2%	5.4%	4.3%	4.3%	**4.2%**
			L	.	.	.	139.5	144.3	148.6	153.4	159.1	164.2	169.5	.	.	.	3.2%	3.4%	3.0%	3.2%	3.7%	3.2%	3.2%	**3.3%**

ANNEX F. FUTURE TRAFFIC AND GROWTH

F.1 Summary of the Forecast. Annual IFR Movements 2003-2012.

Figure 27. Annual traffic per traffic zone and 2006-2012 average annual growth.

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012
Albania	H	.	.	.	122	128	134	140	146	152	157	**4.5%**
	B	93	104	116	120	124	128	133	138	143	147	**3.5%**
	L	.	.	.	118	122	126	130	134	138	142	**2.9%**
Armenia	H	.	.	.	49	57	65	72	79	86	93	**12%**
	B	15	39	42	48	55	62	67	73	79	85	**11%**
	L	.	.	.	47	54	60	64	69	74	79	**9.5%**
Austria	H	.	.	.	1,112	1,174	1,235	1,300	1,357	1,419	1,477	**5.0%**
	B	870	954	1,049	1,096	1,145	1,191	1,239	1,292	1,338	1,386	**4.1%**
	L	.	.	.	1,082	1,122	1,159	1,198	1,241	1,281	1,319	**3.3%**
Belarus	H	.	.	.	140	151	163	176	189	202	216	**7.6%**
	B	86	118	129	138	147	155	165	176	186	197	**6.2%**
	L	.	.	.	136	144	151	160	169	178	187	**5.4%**
Belgium/Luxembourg	H	.	.	.	1,044	1,082	1,127	1,171	1,211	1,250	1,284	**3.5%**
	B	964	982	1,006	1,034	1,062	1,091	1,120	1,152	1,187	1,223	**2.8%**
	L	.	.	.	1,027	1,047	1,066	1,092	1,122	1,149	1,176	**2.2%**
Bosnia-Herzegovina	H	.	.	.	172	185	198	210	221	232	243	**6.3%**
	B	82	125	159	169	179	189	198	208	217	226	**5.2%**
	L	.	.	.	165	174	181	189	197	205	212	**4.3%**
Bulgaria	H	.	.	.	435	475	513	547	572	598	623	**6.7%**
	B	311	358	395	427	461	490	518	543	563	584	**5.7%**
	L	.	.	.	416	442	465	488	512	533	549	**4.8%**
Canary Islands	H	.	.	.	304	317	330	342	354	366	378	**3.8%**
	B	265	277	291	301	311	320	330	339	349	359	**3.1%**
	L	.	.	.	299	307	314	321	329	337	346	**2.5%**
Croatia	H	.	.	.	356	380	404	427	448	470	492	**5.9%**
	B	231	281	330	349	368	385	403	422	439	457	**4.7%**
	L	.	.	.	343	358	372	387	402	417	431	**3.9%**
Cyprus	H	.	.	.	223	237	253	268	282	298	314	**6.0%**
	B	198	205	208	218	230	241	254	266	278	291	**4.9%**
	L	.	.	.	216	225	235	245	256	266	277	**4.1%**
Czech Republic	H	.	.	.	640	684	728	774	818	866	913	**6.3%**
	B	454	552	597	630	665	698	732	771	807	845	**5.1%**
	L	.	.	.	622	650	677	705	736	765	795	**4.2%**

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012
Denmark	H	.	.	.	598	615	639	663	686	710	733	**3.3%**
	B	540	585	585	593	605	621	638	659	678	697	**2.5%**
	L	.	.	.	589	599	611	626	641	656	671	**2.0%**
Estonia	H	.	.	.	191	204	217	232	246	262	277	**6.4%**
	B	93	171	180	188	197	207	217	229	241	252	**4.9%**
	L	.	.	.	186	194	202	210	220	228	237	**4.0%**
FYROM	H	.	.	.	116	123	129	136	143	150	158	**5.2%**
	B	96	105	110	114	118	123	129	134	140	146	**4.1%**
	L	.	.	.	113	116	120	125	130	134	139	**3.4%**
Finland	H	.	.	.	250	259	269	278	288	298	307	**3.5%**
	B	227	242	242	248	254	261	268	276	284	291	**2.7%**
	L	.	.	.	246	251	257	263	269	275	281	**2.2%**
France	H	.	.	.	2,864	2,981	3,085	3,187	3,286	3,381	3,469	**3.4%**
	B	2,583	2,664	2,746	2,838	2,929	3,007	3,078	3,156	3,235	3,318	**2.7%**
	L	.	.	.	2,818	2,886	2,942	2,997	3,067	3,134	3,201	**2.2%**
Georgia	H	.	.	.	81	90	99	107	116	125	135	**9.0%**
	B	40	64	74	80	87	94	101	108	116	123	**7.6%**
	L	.	.	.	79	86	92	97	103	109	115	**6.6%**
Germany	H	.	.	.	2,983	3,099	3,217	3,371	3,495	3,637	3,748	**4.0%**
	B	2,553	2,711	2,851	2,950	3,045	3,129	3,230	3,353	3,456	3,562	**3.2%**
	L	.	.	.	2,924	3,000	3,066	3,146	3,243	3,326	3,409	**2.6%**
Greece	H	.	.	.	575	603	633	662	690	720	750	**4.6%**
	B	477	534	547	563	582	604	628	652	675	699	**3.5%**
	L	.	.	.	558	572	590	609	629	649	669	**2.9%**
Hungary	H	.	.	.	629	681	733	783	827	876	923	**6.9%**
	B	454	523	579	618	661	700	738	780	816	854	**5.7%**
	L	.	.	.	608	643	674	706	741	773	802	**4.8%**
Ireland	H	.	.	.	565	591	621	653	686	721	755	**5.0%**
	B	488	502	535	560	583	604	628	658	685	714	**4.2%**
	L	.	.	.	555	575	592	612	633	653	675	**3.4%**
Italy	H	.	.	.	1,643	1,718	1,793	1,866	1,935	2,007	2,080	**4.0%**
	B	1,491	1,519	1,577	1,624	1,680	1,730	1,783	1,844	1,903	1,963	**3.2%**
	L	.	.	.	1,608	1,647	1,691	1,738	1,789	1,837	1,885	**2.6%**
Latvia	H	.	.	.	167	180	194	210	225	242	260	**7.6%**
	B	104	142	155	164	174	184	196	209	222	236	**6.2%**
	L	.	.	.	162	170	179	188	199	209	220	**5.1%**
Lisbon FIR	H	.	.	.	403	423	441	459	477	495	513	**4.4%**
	B	343	363	379	398	415	428	442	457	472	487	**3.6%**
	L	.	.	.	395	409	420	431	443	455	467	**3.0%**

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012
Lithuania	H	.	.	.	176	190	205	222	239	258	276	**7.9%**
	B	95	147	162	172	183	194	206	220	234	249	**6.2%**
	L	.	.	.	170	179	188	198	210	221	233	**5.3%**
Malta	H	.	.	.	78	82	86	91	95	99	104	**4.8%**
	B	69	73	75	78	81	83	87	90	94	97	**3.8%**
	L	.	.	.	77	80	82	85	88	90	93	**3.2%**
Moldova	H	.	.	.	28	31	34	36	39	42	44	**8.2%**
	B	20	23	25	27	29	31	33	36	38	40	**6.5%**
	L	.	.	.	27	29	30	32	34	36	38	**5.7%**
Netherlands	H	.	.	.	1,036	1,076	1,122	1,168	1,210	1,256	1,297	**3.9%**
	B	922	968	996	1,027	1,057	1,086	1,120	1,161	1,198	1,236	**3.1%**
	L	.	.	.	1,017	1,040	1,064	1,092	1,122	1,150	1,179	**2.4%**
Norway	H	.	.	.	500	516	534	552	569	586	603	**3.2%**
	B	442	466	483	496	509	522	536	550	563	577	**2.6%**
	L	.	.	.	493	503	514	525	537	548	559	**2.1%**
Poland	H	.	.	.	464	499	532	570	606	646	684	**7.1%**
	B	300	363	422	454	482	507	534	566	595	625	**5.8%**
	L	.	.	.	446	468	489	511	537	561	585	**4.8%**
Romania	H	.	.	.	454	503	549	592	629	668	706	**8.1%**
	B	325	371	410	445	486	521	554	589	618	649	**6.8%**
	L	.	.	.	437	471	500	528	557	583	607	**5.8%**
Santa Maria FIR	H	.	.	.	112	118	123	129	135	141	147	**4.9%**
	B	98	102	106	111	116	120	124	130	135	140	**4.1%**
	L	.	.	.	110	114	118	122	126	130	134	**3.5%**
Serbia&Montenegro	H	.	.	.	388	415	442	467	489	512	535	**5.8%**
	B	264	314	361	380	402	422	442	462	479	497	**4.7%**
	L	.	.	.	374	391	407	424	441	457	471	**3.9%**
Slovakia	H	.	.	.	343	370	397	423	448	475	502	**6.8%**
	B	233	284	317	338	359	379	399	421	442	464	**5.6%**
	L	.	.	.	333	350	366	383	401	418	434	**4.6%**
Slovenia	H	.	.	.	276	294	311	328	343	360	375	**5.6%**
	B	191	222	257	271	285	298	311	325	337	350	**4.5%**
	L	.	.	.	266	277	287	297	309	319	329	**3.6%**
Spain	H	.	.	.	1,669	1,770	1,861	1,937	2,012	2,100	2,174	**4.8%**
	B	1,384	1,470	1,561	1,650	1,721	1,779	1,842	1,904	1,970	2,043	**3.9%**
	L	.	.	.	1,636	1,693	1,727	1,774	1,832	1,890	1,952	**3.2%**
Sweden	H	.	.	.	683	707	737	769	799	832	864	**3.8%**
	B	610	664	664	676	693	715	739	766	791	817	**3.0%**
	L	.	.	.	671	685	703	722	744	764	785	**2.4%**

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012
Switzerland	H	.	.	.	1,045	1,082	1,118	1,159	1,195	1,235	1,269	**3.4%**
	B	949	977	1,007	1,035	1,064	1,089	1,118	1,152	1,181	1,210	**2.7%**
	L	.	.	.	1,028	1,051	1,071	1,094	1,121	1,144	1,167	**2.1%**
Turkey	H	.	.	.	704	764	824	877	909	945	980	**6.3%**
	B	471	561	641	695	746	795	842	881	910	940	**5.6%**
	L	.	.	.	675	712	748	788	832	871	895	**4.9%**
Ukraine	H	.	.	.	370	400	433	466	497	531	563	**7.4%**
	B	230	312	341	364	389	414	440	468	493	520	**6.2%**
	L	.	.	.	360	381	403	425	449	471	493	**5.4%**
United Kingdom	H	.	.	.	2,479	2,567	2,670	2,769	2,865	2,957	3,043	**3.5%**
	B	2,155	2,265	2,384	2,460	2,535	2,603	2,674	2,763	2,845	2,928	**3.0%**
	L	.	.	.	2,441	2,499	2,550	2,606	2,663	2,716	2,771	**2.2%**
ESRA	H	.	.	.	9,525	9,961	10,398	10,826	11,217	11,634	12,019	**4.1%**
	B	8,344	8,745	9,087	9,424	9,759	10,065	10,389	10,738	11,065	11,405	**3.3%**
	L	.	.	.	9,336	9,589	9,820	10,081	10,375	10,654	10,925	**2.7%**

F.2 Summary of the Forecast. Growth Rates 2004-2012

Figure 28. Annual growth rates per traffic zone and 2006-2012 average annual growth.

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012 Ave. Annual Growth
Albania	H	.	.	5.3%	4.9%	4.9%	4.7%	3.9%	4.0%	3.7%	**4.5%**
	B	12%	11%	3.5%	3.7%	3.7%	3.7%	3.7%	3.1%	3.2%	**3.5%**
	L	.	.	2.5%	3.0%	3.1%	3.2%	3.3%	2.9%	2.6%	**2.9%**
Armenia	H	.	.	17%	16%	15%	10%	9.0%	9.4%	8.7%	**12.1%**
	B	145%	7.7%	15%	14%	12%	8.9%	8.3%	7.9%	7.4%	**10.6%**
	L	.	.	13%	13%	11%	7.8%	7.5%	7.2%	6.2%	**9.5%**
Austria	H	.	.	6.0%	5.6%	5.2%	5.2%	4.4%	4.6%	4.1%	**5.0%**
	B	9.7%	9.9%	4.5%	4.5%	4.0%	4.0%	4.3%	3.6%	3.6%	**4.1%**
	L	.	.	3.2%	3.6%	3.3%	3.4%	3.6%	3.2%	3.0%	**3.3%**
Belarus	H	.	.	8.6%	8.0%	7.7%	7.9%	7.1%	7.4%	6.6%	**7.6%**
	B	37%	9.3%	6.7%	6.4%	5.9%	6.2%	6.8%	5.7%	5.8%	**6.2%**
	L	.	.	5.5%	5.6%	5.1%	5.4%	5.9%	5.1%	5.1%	**5.4%**
Belgium/Luxembourg	H	.	.	3.7%	3.7%	4.1%	3.9%	3.4%	3.2%	2.7%	**3.5%**
	B	1.9%	2.5%	2.7%	2.8%	2.7%	2.6%	2.9%	3.0%	3.0%	**2.8%**
	L	.	.	2.0%	1.9%	1.8%	2.5%	2.7%	2.4%	2.4%	**2.2%**
Bosnia-Herzegovina	H	.	.	8.4%	7.7%	6.8%	6.1%	5.2%	5.2%	4.8%	**6.3%**
	B	53%	26%	6.3%	6.3%	5.3%	5.0%	4.9%	4.2%	4.2%	**5.2%**
	L	.	.	4.3%	5.0%	4.4%	4.3%	4.3%	3.9%	3.5%	**4.3%**
Bulgaria	H	.	.	10%	9.3%	8.0%	6.5%	4.6%	4.5%	4.2%	**6.7%**
	B	15%	10%	8.2%	7.9%	6.4%	5.6%	4.9%	3.6%	3.7%	**5.7%**
	L	.	.	5.4%	6.1%	5.2%	4.9%	4.9%	4.2%	2.9%	**4.8%**
Canary Islands	H	.	.	4.6%	4.3%	4.0%	3.6%	3.5%	3.5%	3.3%	**3.8%**
	B	4.4%	4.9%	3.5%	3.3%	3.0%	2.9%	3.0%	2.9%	2.9%	**3.1%**
	L	.	.	2.8%	2.7%	2.3%	2.4%	2.5%	2.4%	2.4%	**2.5%**
Croatia	H	.	.	7.7%	6.9%	6.2%	5.7%	5.0%	5.0%	4.6%	**5.9%**
	B	22%	18%	5.6%	5.5%	4.8%	4.6%	4.6%	4.0%	4.0%	**4.7%**
	L	.	.	3.7%	4.3%	3.9%	4.0%	4.0%	3.6%	3.3%	**3.9%**
Cyprus	H	.	.	7.0%	6.6%	6.5%	6.1%	5.4%	5.5%	5.3%	**6.0%**
	B	3.8%	1.3%	5.0%	5.1%	5.1%	5.1%	5.0%	4.5%	4.5%	**4.9%**
	L	.	.	3.9%	4.2%	4.3%	4.3%	4.4%	4.1%	3.8%	**4.1%**
Czech Republic	H	.	.	7.3%	6.8%	6.5%	6.3%	5.6%	5.9%	5.4%	**6.3%**
	B	22%	8.2%	5.6%	5.4%	4.9%	4.9%	5.3%	4.7%	4.7%	**5.1%**
	L	.	.	4.2%	4.5%	4.1%	4.1%	4.4%	4.0%	3.9%	**4.2%**

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012 Ave. Annual Growth
Denmark	H	.	.	2.3%	2.8%	3.8%	3.7%	3.5%	3.5%	3.3%	**3.3%**
	B	8.4%	-0.1%	1.4%	2.0%	2.6%	2.8%	3.2%	2.9%	2.9%	**2.5%**
	L	.	.	0.8%	1.6%	2.1%	2.4%	2.4%	2.3%	2.3%	**2.0%**
Estonia	H	.	.	6.4%	6.3%	6.6%	6.8%	6.1%	6.5%	5.8%	**6.4%**
	B	83%	5.3%	4.6%	4.8%	4.7%	5.0%	5.7%	4.9%	4.9%	**4.9%**
	L	.	.	3.6%	4.0%	4.0%	4.1%	4.6%	4.0%	4.0%	**4.0%**
FYROM	H	.	.	5.6%	5.5%	5.5%	5.4%	4.9%	5.0%	4.8%	**5.2%**
	B	8.7%	5.3%	3.4%	3.9%	4.2%	4.3%	4.5%	4.1%	4.2%	**4.1%**
	L	.	.	2.4%	3.2%	3.5%	3.7%	3.8%	3.6%	3.5%	**3.4%**
Finland	H	.	.	3.4%	3.5%	3.8%	3.6%	3.4%	3.4%	3.2%	**3.5%**
	B	6.6%	-0.3%	2.4%	2.6%	2.7%	2.8%	3.0%	2.7%	2.7%	**2.7%**
	L	.	.	1.8%	2.0%	2.2%	2.4%	2.5%	2.2%	2.2%	**2.2%**
France	H	.	.	4.3%	4.1%	3.5%	3.3%	3.1%	2.9%	2.6%	**3.4%**
	B	3.1%	3.1%	3.3%	3.2%	2.7%	2.3%	2.5%	2.5%	2.5%	**2.7%**
	L	.	.	2.6%	2.4%	1.9%	1.9%	2.3%	2.2%	2.1%	**2.2%**
Georgia	H	.	.	11%	10%	9.9%	8.7%	7.7%	8.2%	7.5%	**9.0%**
	B	61%	14%	9.0%	8.6%	7.9%	7.0%	7.4%	6.7%	6.6%	**7.6%**
	L	.	.	7.9%	7.7%	7.0%	6.0%	6.3%	5.9%	5.6%	**6.6%**
Germany	H	.	.	4.6%	3.9%	3.8%	4.8%	3.7%	4.1%	3.0%	**4.0%**
	B	6.2%	5.2%	3.5%	3.2%	2.8%	3.2%	3.8%	3.1%	3.1%	**3.2%**
	L	.	.	2.5%	2.6%	2.2%	2.6%	3.1%	2.6%	2.5%	**2.6%**
Greece	H	.	.	5.1%	4.9%	4.8%	4.6%	4.3%	4.3%	4.2%	**4.6%**
	B	12%	2.5%	2.9%	3.4%	3.8%	3.8%	3.9%	3.5%	3.6%	**3.5%**
	L	.	.	1.8%	2.6%	3.1%	3.3%	3.3%	3.1%	3.0%	**2.9%**
Hungary	H	.	.	8.6%	8.3%	7.6%	6.9%	5.7%	5.9%	5.3%	**6.9%**
	B	15%	11%	6.8%	6.9%	5.9%	5.5%	5.6%	4.6%	4.7%	**5.7%**
	L	.	.	5.0%	5.7%	5.0%	4.7%	4.9%	4.3%	3.8%	**4.8%**
Ireland	H	.	.	5.5%	4.8%	5.0%	5.2%	5.0%	5.1%	4.8%	**5.0%**
	B	2.8%	6.6%	4.5%	4.1%	3.7%	4.0%	4.7%	4.2%	4.2%	**4.2%**
	L	.	.	3.7%	3.5%	3.1%	3.2%	3.5%	3.2%	3.3%	**3.4%**
Italy	H	.	.	4.2%	4.5%	4.4%	4.0%	3.7%	3.7%	3.6%	**4.0%**
	B	1.9%	3.8%	3.0%	3.4%	3.0%	3.1%	3.4%	3.2%	3.1%	**3.2%**
	L	.	.	2.0%	2.4%	2.6%	2.8%	2.9%	2.7%	2.6%	**2.6%**
Latvia	H	.	.	7.8%	7.7%	7.8%	7.9%	7.3%	7.7%	7.2%	**7.6%**
	B	36%	9.1%	5.9%	6.1%	5.8%	6.1%	6.9%	6.1%	6.2%	**6.2%**
	L	.	.	4.7%	5.1%	5.0%	5.2%	5.6%	5.1%	5.1%	**5.1%**
Lisbon FIR	H	.	.	6.2%	5.1%	4.3%	4.0%	3.8%	3.9%	3.6%	**4.4%**
	B	5.6%	4.5%	5.1%	4.1%	3.3%	3.2%	3.4%	3.2%	3.2%	**3.6%**
	L	.	.	4.3%	3.4%	2.6%	2.7%	2.8%	2.7%	2.7%	**3.0%**

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012 Ave. Annual Growth
Lithuania	H	.	.	8.5%	8.0%	7.9%	8.2%	7.4%	7.9%	7.2%	**7.9%**
	B	55%	10%	5.9%	6.2%	5.9%	6.3%	7.0%	6.2%	6.2%	**6.2%**
	L	.	.	4.7%	5.2%	5.1%	5.4%	5.9%	5.3%	5.3%	**5.3%**
Malta	H	.	.	4.8%	4.7%	4.8%	5.1%	4.7%	4.8%	4.5%	**4.8%**
	B	4.6%	3.0%	3.6%	3.7%	3.6%	3.8%	4.2%	3.7%	3.7%	**3.8%**
	L	.	.	2.9%	3.2%	3.1%	3.2%	3.5%	3.2%	3.1%	**3.2%**
Moldova	H	.	.	9.5%	10%	9.2%	8.0%	7.1%	6.9%	6.6%	**8.2%**
	B	16%	9.0%	6.2%	7.8%	7.3%	6.8%	6.4%	5.7%	5.6%	**6.5%**
	L	.	.	5.1%	6.7%	6.4%	6.0%	5.9%	5.3%	4.9%	**5.7%**
Netherlands	H	.	.	4.0%	3.9%	4.3%	4.1%	3.6%	3.8%	3.3%	**3.9%**
	B	4.9%	2.9%	3.1%	2.9%	2.8%	3.1%	3.6%	3.2%	3.2%	**3.1%**
	L	.	.	2.1%	2.3%	2.3%	2.6%	2.7%	2.5%	2.5%	**2.4%**
Norway	H	.	.	3.3%	3.4%	3.5%	3.2%	3.1%	3.0%	3.0%	**3.2%**
	B	5.6%	3.6%	2.5%	2.6%	2.6%	2.6%	2.6%	2.4%	2.5%	**2.6%**
	L	.	.	2.0%	2.1%	2.1%	2.2%	2.2%	2.0%	2.0%	**2.1%**
Poland	H	.	.	9.8%	7.6%	6.7%	7.1%	6.2%	6.6%	5.9%	**7.1%**
	B	21%	16%	7.5%	6.2%	5.1%	5.4%	5.9%	5.1%	5.1%	**5.8%**
	L	.	.	5.6%	5.0%	4.4%	4.6%	5.0%	4.4%	4.4%	**4.8%**
Romania	H	.	.	11%	11%	9.1%	7.7%	6.2%	6.3%	5.6%	**8.1%**
	B	14%	10%	8.6%	9.2%	7.2%	6.4%	6.2%	5.0%	4.9%	**6.8%**
	L	.	.	6.7%	7.7%	6.1%	5.5%	5.5%	4.8%	4.0%	**5.8%**
Santa Maria FIR	H	.	.	6.0%	5.2%	4.7%	4.7%	4.5%	4.7%	4.3%	**4.9%**
	B	4.1%	3.5%	4.9%	4.4%	3.8%	3.6%	4.2%	3.8%	3.8%	**4.1%**
	L	.	.	4.2%	3.9%	3.3%	3.1%	3.4%	3.2%	3.2%	**3.5%**
Serbia&Montenegro	H	.	.	7.4%	7.1%	6.4%	5.8%	4.7%	4.7%	4.4%	**5.8%**
	B	19%	15%	5.4%	5.6%	5.0%	4.7%	4.6%	3.7%	3.8%	**4.7%**
	L	.	.	3.7%	4.5%	4.1%	4.0%	4.1%	3.7%	3.1%	**3.9%**
Slovakia	H	.	.	8.2%	7.7%	7.3%	6.6%	5.9%	6.0%	5.7%	**6.8%**
	B	22%	12%	6.4%	6.3%	5.6%	5.3%	5.5%	4.9%	4.9%	**5.6%**
	L	.	.	4.8%	5.1%	4.7%	4.5%	4.6%	4.3%	4.0%	**4.6%**
Slovenia	H	.	.	7.6%	6.4%	5.7%	5.5%	4.7%	4.8%	4.3%	**5.6%**
	B	16%	16%	5.7%	5.1%	4.3%	4.4%	4.5%	3.7%	3.8%	**4.5%**
	L	.	.	3.7%	4.0%	3.5%	3.7%	3.9%	3.4%	3.1%	**3.6%**
Spain	H	.	.	6.9%	6.1%	5.1%	4.1%	3.9%	4.3%	3.5%	**4.8%**
	B	6.2%	6.2%	5.7%	4.4%	3.3%	3.5%	3.4%	3.5%	3.7%	**3.9%**
	L	.	.	4.9%	3.5%	2.0%	2.7%	3.3%	3.2%	3.3%	**3.2%**
Sweden	H	.	.	2.9%	3.5%	4.3%	4.2%	4.0%	4.1%	3.9%	**3.8%**
	B	8.9%	-0.1%	1.9%	2.6%	3.2%	3.3%	3.6%	3.3%	3.3%	**3.0%**
	L	.	.	1.2%	2.0%	2.6%	2.8%	2.9%	2.8%	2.8%	**2.4%**

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2006-2012 Ave. Annual Growth
Switzerland	H	.	.	3.8%	3.5%	3.3%	3.7%	3.1%	3.4%	2.8%	**3.4%**
	B	3.0%	3.1%	2.8%	2.8%	2.4%	2.7%	3.0%	2.5%	2.5%	**2.7%**
	L	.	.	2.1%	2.3%	1.9%	2.1%	2.4%	2.1%	2.0%	**2.1%**
Turkey	H	.	.	9.8%	8.5%	7.9%	6.4%	3.7%	3.9%	3.7%	**6.3%**
	B	19%	14%	8.4%	7.4%	6.5%	5.9%	4.7%	3.3%	3.3%	**5.6%**
	L	.	.	5.2%	5.5%	5.2%	5.3%	5.5%	4.7%	2.8%	**4.9%**
Ukraine	H	.	.	8.5%	8.2%	8.1%	7.7%	6.5%	6.8%	6.2%	**7.4%**
	B	35%	9.3%	6.9%	6.8%	6.3%	6.3%	6.4%	5.5%	5.4%	**6.2%**
	L	.	.	5.7%	5.9%	5.5%	5.5%	5.5%	5.0%	4.7%	**5.4%**
United Kingdom	H	.	.	4.0%	3.5%	4.0%	3.7%	3.4%	3.2%	2.9%	**3.5%**
	B	5.1%	5.3%	3.2%	3.0%	2.7%	2.7%	3.3%	3.0%	2.9%	**3.0%**
	L	.	.	2.4%	2.4%	2.1%	2.2%	2.2%	2.0%	2.0%	**2.2%**
ESRA	H	.	.	4.8%	4.6%	4.4%	4.1%	3.6%	3.7%	3.3%	**4.1%**
	B	4.8%	3.9%	3.7%	3.6%	3.1%	3.2%	3.4%	3.0%	3.1%	**3.3%**
	L	.	.	2.7%	2.7%	2.4%	2.7%	2.9%	2.7%	2.5%	**2.7%**

ANNEX G. REFERENCES

1 *EUROCONTROL Medium-Term Forecast, Flight Movements (2005-2011), Vol. 1.* EUROCONTROL STATFOR, February 2005. www.eurocontrol.int/statfor

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