

Economic Compass

Global Perspectives for Investors

ISSUE 30 • JUNE 2014



ERIC LASCELLES Chief Economist RBC Global Asset Management Inc.

MEASURING ECONOMIC UPSIDE

After a temporary winter chill, the developed world's economic recovery appears to be back on schedule. Stronger growth is likely through 2014 and 2015, and increasingly priced into market expectations. Given this, the obvious next step for savvy investors is to probe even more deeply into the future.

Traditionally, medium-term economic projections (those gazing out three to five years) are generated on the basis of anticipated developments in monetary and fiscal policy. Policymaker actions are sufficiently predictable and their effects long-enoughlived that plausible forecasts can be spun for variables such as employment, wages, spending and capital expenditures, ultimately congealing into a GDP forecast. This is a standard part of our own forecasting toolkit.

Nevertheless, we are always on the hunt for new perspectives. Recently, we began to wonder if this customary approach might be missing the forest for the trees, focused so tightly on the dayto-day actions of policymakers that it fails to account for what policymakers are trying to achieve.

What are policymakers' medium-term goals? Simply put, they seek to balance their budget, minimize any mismatch between demand and output, return their economy to its full potential, engage in reforms that enhance their economy's potential, and nudge their currency toward a reasonable valuation.

What if we cut out the intermediate step and focused instead on these end goals? This thinking has inspired the Economic Upside Index, a novel measure that starts with the presumption that policymakers will be successful in their efforts,¹ which permits the luxury of assessing the economic consequences of those eventual victories. The end result is a metric that gauges which of 19 OECD nations are primed for unusually good growth

¹And acknowledges unalterable outcomes like demographic change.

HIGHLIGHTS

- Traditional forecasting techniques focus so tightly on the day-to-day actions of
 policymakers that they lose sight of what policymakers are trying to achieve.
- A radically different approach simply evaluates what would happen if policymakers achieved key goals such as balancing their budget, returning their economy to its full potential and nudging their currency toward a fair valuation.
- As a general (though imprecise) rule, the resultant Economic Upside Index calculates that the countries that fared best through the financial crisis like Canada and Australia now have the least economic upside awaiting them over the next five years, while those that suffered horribly have the potential to zoom forward.



Note: These measures estimate the potential cumulative boost to demand over the next five years, beyond the normal trend growth rate for each country. The boost is assumed to come as current account imbalances, fiscal deficits, output gaps and residential investment gaps close, factoring in the effects of demographics, currency movements and structural reforms on capacity. The Expanded Index includes an additional variable that acknowledges the burden of servicing public debt. Source: Haver Analytics, RBC GAM

in economic demand over the next five years, relative to their usual trajectory.

The measure's findings are initially somewhat disorienting, given the narrative that has been pounded into our collective conscious in recent years. As a general (though imprecise) rule, the Economic Upside Index calculates that the countries that fared best through the financial crisis – like Canada and Australia – now have the least economic upside awaiting them, while those that suffered horribly – such as Greece and Ireland – have the potential to zoom forward (Exhibit 1).

At its heart, then, the Economic Upside Index has a strong tendency toward mean reversion. This is understandable

enough: those countries that already enjoyed outsized growth as they ate through their output gap have less on their plate for the future.

Methodology

The Economic Upside Index combines seven variables that collectively assess the extent to which a country's economic demand (on the bottom solid rung of the ladder in Exhibit 2) can be elevated to greater heights. The first step is the extent to which demand can catch up to output. The next is the degree to which output can catch up to its full potential. The final rungs reflect the extent to which potential itself can be prodded forward via demographic changes, currency movements and structural reforms.

In contrast to the stylistic depiction of Exhibit 2, no country can expect each and every one of the policy goals to elevate their economic demand. For instance, all of the countries are on track for deteriorating demographics, which will act as an impediment to growth. The task, then, is to tally up the various forces and arrive at a net effect on economic growth.

Faster, not fast

To be clear, the country with the most upside will not necessarily manage the fastest economic growth. In general, emerging market countries will still outgrow developed ones, and younger populations will usually outpace older ones. Rather, the winners in the Economic Upside Index are the countries most capable of exceeding their historically normal growth rate, whatever that is.

This isn't as obscure a consideration as it initially seems. Financial markets are relentlessly forward-looking, pricing in expected earnings and anticipated economic growth. If fast growth is the norm for a country, more of the same provides no guarantee of financial-market fireworks. The key to outsized market returns lies in identifying those countries poised for stronger-than-usual growth, rather than outright strong growth. That is precisely what the Economic Upside Index sniffs out.

Tallying

The beauty of (all but one of) the included economic variables is that they already speak the language of GDP. To illustrate, closing a 2-percentage-point output gap would add 2 percentage points to economic demand, precisely as would eliminating a 2-percentage-point current-account surplus. In principle, then, our task is a simple one: add up the effects of each variable to arrive at the aggregate economic upside.

Alas, there are two complications that slightly disrupt this elegant construction. First, the currency-valuation variable does not directly map onto GDP, requiring a conversion into GDP terms using a standard multiplier.



Second, to maximize the robustness of the index, we have intentionally included two pairings of variables whose concepts partially overlap. To avoid double-counting their findings, each pair shares a weight that sums to one.

We can now turn to the specific variables, the logic behind their inclusion and what they reveal:

1) Current-account balance

Current-account balances provide a clear assessment of which countries are living beyond (or below) their means. A current-account deficit indicates that a nation's demand races unsustainably ahead of its output, financed by perpetually more borrowing from foreigners.

On the other hand, a current-account surplus reveals a country that is consuming less than it can afford. In the parlance of Exhibit 2, demand can sustainably rise up to the level of output.

Assuming mean reversion

Inherent in the Economic Upside Model is the assumption that this extra demand will finally be unleashed (Exhibit 3).

It is a fair point that current-account imbalances appear to converge upon desirable levels at a much more leisurely pace than several of the other variables, so there is no guarantee that they will have vanished in five years.

Fortunately, there is reason to think that current-account imbalances will make at least some progress toward this ideal: post-financial-crisis policymakers have pushed hard to reduce the so-called "global savings glut" that contributed to credit excesses. They have had considerable success so far (Exhibit 4).

And if current-account imbalances haven't vanished in five years, the remaining gaps can still quite correctly be interpreted as latent economic upside or downside, waiting to be tapped.

Findings

This measure bodes especially well for large current-account surplus nations such as Switzerland, the Netherlands, Germany, Ireland and Sweden. It bodes poorly for Turkey, the U.K., Chile, Canada, and Australia.

When compiling the overall Economic Upside Index, we pair the current-account balance with the structural fiscal balance in the next section due to their similarity, and so assign it a diminished weight of 0.7.

2) Fiscal balance

The structural fiscal balance captures how far a country is from balancing its public budget.² A government with a fiscal deficit can be thought of as living beyond its means, and a natural medium-term goal of policymakers is to eliminate this deficit

² Sometimes, a fiscal deficit is merely cyclical in nature, meaning that it will go away without any special effort by policymakers as the subsequent economic recovery takes hold. We only seek to capture the remaining structural part of a fiscal deficit – the part requiring hard work and economic sacrifice to eliminate.



via austerity measures. This imposes an economic toll roughly equal in size to the magnitude of the starting deficit.

Why have we included this fiscal variable, when the current-account balance already technically encompasses it along with the private-sector balance? There are three reasons:

- First, the structural fiscal balance is arguably superior to the broader fiscal measure enclosed within the currentaccount balance.
- Second, there is a tendency for the current-account balance to appear stronger than it truly is after periods of extreme economic hardship (such as for some European nations today); the structural fiscal balance helps to lean against that distortion.
- Third, we have greater confidence that structural fiscal deficits will materially close than we do that currentaccount imbalances will vanish, since the former are under the conscious direction of policymakers and disciplined by ratings agencies and the bond market.

The structural fiscal balance reveals several interesting things (Exhibit 5). Unexpectedly, Greece finds itself in the best position of all, with a structural fiscal surplus. This means that – when the Greek economy has finally righted itself – the budget should be in outright surplus without any further austerity needed. South Korea, Switzerland and Germany also fare particularly well. At the other extreme, Japan's structural fiscal deficit is enormous. The U.S., Spanish, Turkish and Mexican deficits are also sizeable, requiring further austerity.



Note: Asia includes China, Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. DE+JP refers to Germany and Japan. Peripheral Europe includes Greece, Ireland, Italy, Portugal and Spain. IMF estimates for 2014. Source: IMF, Haver Analytics, RBC GAM To address double-counting, the structural fiscal balance receives a weight of 0.3 (recall that its twin, the current-account balance, received a weight of 0.7).

3) Output gap

The output gap measures the existence of slack in an economy. A negative output gap indicates that economic output is running below its full potential, while a positive one indicates an economy temporarily running past its potential (and thus in danger of overheating).

Policymakers naturally seek to elevate economic output to its full potential – this is arguably monetary policy's most immediate goal. We need not know how policymakers plan to boil off the economic slack over the coming years, only that they seek to do so, and should eventually succeed.

To continue with the logic of Exhibit 2, closing the output gap raises output to its full potential (in so doing, dragging demand upwards with it).

Thus, the countries with the biggest negative output gaps³ have some of the most outsized growth prospects over the coming years as they converge upon their full capacity (Exhibit 6). Among the best positioned are the usual European suspects: Greece, Ireland, Portugal, Turkey, Italy and Spain. Those with the least output gap upside are Japan, Chile, Germany and Canada.

We pair the output gap with the residential-investment metric in the next section, and so assign it a diminished weight of 0.7.

4) Residential investment

The residential investment share of GDP is a handy proxy for the extent to which housing activity is unnaturally elevated or depressed. When it is unusually low – as in many postcrisis countries today – the expectation is that it will revert to historical norms, boosting economic output (Exhibit 7).

This measure rhymes with the output gap, in that both identify elements of an underperforming economy. We nonetheless opt to keep residential investment in the index for several reasons:

- It frequently plays an outsized role in economic recoveries, and so merits special attention.
- By looking at it in nominal terms, rather than the inflation-adjusted world in which the output gap operates, we are indirectly allowing for the normalization of home prices as well.

Exhibit 5: Most countries must shrink their fiscal deficit







France

U.S. Australia

Note: Based on latest data available. Source: OECD, Haver Analytics, RBC GAM

letherlands

Spain

Sweden

U.K. Switzerland Mexico Korea Canada

Latent downside

Germany

Chile

Japan



0 2

4

Ireland

Greece

Turkey

Italy

Portugal





Note: Difference of latest residential investment as % of GDP and historical average since 1980. Source: OECD, Haver Analytics, RBC GAM

³ This report uses OECD estimates of the output gap for all countries. We could be convinced that the U.S. output gap is slightly smaller than the official estimate (due to economic decay), and that peripheral European output gaps are somewhat larger (due to enormous unemployment rates that outmuscle the opposing forces of decay). Nevertheless, we believe these figures to be the closest to the truth of the various official estimates maintained by international agencies.

 Residential investment is a concrete measure and so is conceivably more trustworthy than the theory-based output gap, whose estimation requires a number of sophisticated assumptions, and for which there are conflicting estimates provided by different authorities.

Calculating the residential investment gap reveals several European nations with the most upside, given previously devastated housing markets, including Greece, Portugal, Ireland and Spain. Those with the least upside are countries whose housing markets never really suffered, including Chile, Turkey, Canada, Germany and Mexico.

To address the issue of double-counting, we assign a weight of 0.3 to the residential-investment gap (versus the aforementioned 0.7 weight for the output gap).

5) Demographics

We now swivel toward a set of three variables that alter the sustainable potential growth rate itself, rather than merely nudging demand toward a pre-existing potential.

At its most simplistic, the sustainable economic growth rate is derived from the growth rate of workers plus the extent to which they become more productive. Demographics naturally play a central role in anticipating trends in the former.

We compare each country's cumulative population⁴ growth over the past five years to its expected population growth⁵ over the next five years. The gap between the two indicates the extent to which the level of potential output will be higher or lower than suggested by the prior trend.

⁴ We equally weight the overall population growth rate (a proxy for demand) and the working-age population growth rate (a proxy for output).
 ⁵ As estimated by the United Nations.



Note: Cumulative change in the growth rate of two variables – total population and working-age population, weighted equally – over the next 5 years versus the rate over the past 5 years. Source: UN, Haver Analytics, RBC GAM As it happens, demographics are set to cast a shadow on the potential growth rate of all the examined countries over the coming five years. The degree varies, of course (Exhibit 8). The worst effects will be felt in South Korea, Spain, Turkey, Australia and Chile. The best (or, in this case, the least bad) effects will be in Sweden, the U.K., Japan and the Netherlands.

If Japan's placement seems surprising (doesn't Japan have the worst demographics in the world?) keep in mind that this component measures the extent to which demographic trends are deteriorating, not how bad they are in the first place. The fact that Japan has a shrinking population certainly acts as a serious constraint on its growth. But the issue at hand is how much more constricting it will become in the future. In Japan's case, the answer is not that much.

6) Currency valuation

We next consider the level of each country's currency relative to its fair value, defined as the real average trade-weighted exchange rate since 1996. Contrary to initial instincts, we judge that those countries with the most undervalued exchange rates to be at the greatest disadvantage (Exhibit 9). The reason for this is that the undervalued countries have been enjoying an artificial (and inherently temporary) competitive advantage and, as currency valuations revert to fair value over the medium run, those countries will suffer an economic drag. The reverse is true for countries with overvalued exchange rates.

Unlike the other variables, currency misvaluations do not map directly onto economic growth. The methodology for translating from one to the other is contained in Textbox A. In a nutshell, we multiply every percentage point of expected currency movement by -0.023.



Note: Percentage overvaluation (undervaluation) of latest real effective exchange rate versus historical average since 1996. Economic upside calculated from this by multiplying by 1/3 to capture the fraction that affects potential output, and then by 0.07 to reflect elasticity of currency movements on GDP. Source: OECD, Haver Analytics, RBC GAM

The resulting calculations reveal that the countries in the most promising currency position (meaning the most overvalued exchange rates that can afford to decline, boosting growth) are Australia, Switzerland, Canada and Chile. The countries in the least promising position are Japan,⁶ the U.S. and the U.K.

7) Structural reforms

Another possible avenue for faster potential economic growth comes via structural reforms, such as those that enhance the quality of governance and of public institutions; improve transparency; ensure the fair and consistent rule of law; increase the flexibility of labour laws; remove barriers to the free flow of people, goods and capital; and minimize red tape.

There is no simple way to comprehensively assess the progress of such reforms, gauge their future trajectory or map them onto potential GDP growth.⁷

As a result, we use our own judgment to assess the likely extent and efficacy of structural reforms by country, basing this assessment on a combination of recent policy pledges, ongoing legislative efforts and anticipated trade deals. The results reflect the expected cumulative percentage point boost to economic potential for each country in five years' time (Exhibit 10).

As a reminder, the goal is not to identify which country has the best public-policy environment, just as the purpose of the Economic Upside Index is not to determine which countries will grow most quickly. Rather, the point is to gauge which nations may enjoy the most substantial improvement in their public policies.

In our opinion, the countries undertaking (or poised to undertake) the most fruitful economic reforms are Japan, Greece, Mexico, Ireland, Italy and Spain. Those undertaking the least are Switzerland, Germany, Turkey and Sweden.

8) Public debt servicing

Lastly, we consider the burden of servicing public debt. This measure is actually excluded from our primary upside index, but included in the expanded index (refer back to the blue dashes in Exhibit 1).

TEXTBOX A: MAPPING CURRENCIES ONTO GDP

Currency movements cannot directly map onto economic growth without a few assumptions and calculations.

The first task is assessing the extent to which a currency movement impacts GDP. A standard estimate is that a 1 percentage point appreciation effects a -0.07% hit to the level of economic output.

Second, we must recognize that the main impact of a swinging currency is merely to prod economic output closer to or further away from its potential. Since the Economic Upside Index already assumes that output gaps will close, it would be double-counting to recognize the role that currency movements may play in achieving that outcome.

Thus, we only care about the relatively smaller effect that currency movements have on the level of potential output itself. How can currency movements influence the potential growth rate? A weakening currency can improve competitiveness, stimulating additional productivity-enhancing capital investment and enabling faster wage growth that attracts additional people into the workforce. These two things increase the sustainable supply of an economy.

We assume that two-thirds of the economic effect stemming from a currency movement merely impacts demand, whereas the other third also increases potential supply. Multiplying through by -0.07, we arrive at a -0.023 percentage point hit to potential GDP for every percentage point appreciation in a currency.



Exhibit 10: Structural reforms can boost growth

Source: Haver Analytics, RBC GAM

⁶ Although the nominal yen still looks strong versus the U.S. dollar on a historical basis, the reality is that Japan has run a much lower inflation rate than other countries, resulting in a real exchange rate that is substantially weaker than its nominal one. And when Japan's currency is compared to its trading partners (disproportionately emerging market nations whose currencies have been appreciating in recent years), it again looks much weaker than the standard analysis. We'll confess that our own suspicion is that the yen can weaken somewhat further over the next few years, but one of the purposes of the Upside Economic Index is to remove human judgment from the assessment process, and so we leave the interpretation as it is.

⁷ Measures such as the World Bank's *Ease of Doing Business Index* and the World Economic Forum's *Global Competitiveness Index* make a heroic effort to partially quantify the structural environment.

The central allure of incorporating some measure of public debt is to counteract the worry that peripheral European countries are being given a free ride in the Economic Upside Index. Yes, they will benefit when their big output gaps fade, their low residential investment rates rise and their structural reforms take effect. But aren't we being cavalier in neglecting the giant public debt millstones around their necks? We investigate that possibility here.

Choosing a public debt metric

There are a number of ways to incorporate a measure of public debt into the Economic Upside Index. At an extreme, one might argue that countries should have to pay back any debt above a "normal" level such as 60% of GDP. Obviously, this verges on the impossible for highly indebted countries like Japan and Greece, at least for anything shorter than a multigenerational timeline.

A more realistic option acknowledges that the debt is unlikely to be substantially paid down, and that the true burden can instead be determined by the cost of servicing all of the extra debt. We project interest rates and the level of gross public debt forward five years⁸ and compare the resultant debtservicing cost to where it stood in mid 2007, just before the financial crisis.⁹

A positive gap reflects economic demand that is being "squandered" on servicing public debt when it might otherwise have been put to better use. Thus, it drives a wedge between demand and "discretionary demand," i.e. spending on things that people actually want, rather than are obliged to pay (refer to the heretofore ignored dashed rectangle at the bottom of Exhibit 2).

Results

The findings of this exercise are shown in Exhibit 11. They paint Turkey, Germany, Switzerland and Sweden in a positive light. In contrast, and as expected, Greece, Ireland, Spain, Japan, the U.K. and the U.S. are viewed more negatively.

Don't use me

Why do we exclude public-debt servicing costs from the primary upside index? There are two good reasons:



- The inclusion of public-debt servicing costs would be double-counting, since the fiscal balance variable already incorporates the cost of servicing the public debt as a part of balancing the budget.
- Even if it were not already incorporated elsewhere, it is crucial to recognize that for every nation paying more interest than usual, there is someone else collecting that increased payment, and theoretically capable of deploying it back into the economy.

Limited impact

In the end, the inclusion of this variable doesn't change the scores or rankings drastically. At the margin, peripheral European countries look a bit worse, and a handful of countries swap rankings with one another. But the six countries in the best shape remain the top six, while the six countries in the worst shape remain at the bottom.

More generally, and with relevance to the entire set of model inputs, one of the attractions of having a large handful of inputs is that it affords a certain robustness to the results. A single misspecified variable or a scattering of wonky data points cannot sink the entire undertaking.

Economic Upside Index results

The Economic Upside Index contains some fascinating findings.

At the aggregate level, most countries – 13 out of 19 – can expect a positive economic upside (meaning above-normal growth) over the coming five years. This squares well with our expectation of global economic recovery.

By far the most powerful source of upside growth will be the boost from vanishing output gaps, with the effects of rising residential investment and structural reforms neck and neck in distant second place.

⁸ We use IMF public debt forecasts right through the five-year forecast window, but the available OECD rate forecasts only extend to the end of 2015. These end-of-2015 levels are then assumed to persist through to 2019. To illustrate the effects, this leaves the U.S. 10-year yield at a projected 3.88%, quite close to our own calculated "normal" of 4.0% (see our *Economic Compass* entitled "Estimating a Normal Yield" from November 2013).

⁹ Note that the interest rate on the debt is assumed to be equal to the 10-year government bond yield. This is imprecise in that it fails to acknowledge the lagged effect of prior bond issuance at earlier interest rates (which will keep borrowing costs from rising as quickly as the 10-year yield), and also in that most countries have an average portfolio duration that is somewhat shorter than the 10-year bond.

The greatest collective economic drag will come from the effort to close fiscal deficits, with the demographic drag providing a much milder (if universal) constraint.

Upside

Exhibit 12 highlights the six countries that clearly distinguish themselves from the rest in having the best prospects. It is a European sweep of Greece, Ireland, the Netherlands, Portugal, Switzerland and Italy. Spain just barely misses out, in seventh position.

Intuitively, this clustering makes sense since these are the countries that lost the most, and the principle of rubber ball economics argues that they should therefore be best positioned to bounce back. Nonetheless, it is heartening to recognize that the remaining pain of fiscal austerity in these countries should be trumped by the strength that comes from shrinking output gaps, rising residential investment and structural reforms.

Greece – the country most damaged by the global financial crisis and European sovereign debt crisis – is head and shoulders above the rest in terms of its economic upside, with Ireland and the Netherlands in second and third.

The strong reading for the Netherlands is a bit of a surprise, since it never suffered the same hardships as Portugal, Italy or Spain. The Netherlands' anticipated performance stems from three things: a significant output gap, the apparent scope for rising residential investment¹⁰ and, above all, a giant

¹⁰ Though, anecdotally, some skepticism may be appropriate about the upside remaining for the Netherlands' housing market as it was widely perceived to be overheated not long ago.



Note: These measures estimate the potential cumulative boost to demand over the next five years, beyond the normal trend growth rate for each country. The boost is assumed to come as current account imbalances, fiscal deficits, output gaps and residential investment gaps close, factoring in the effects of demographics, currency movements and structural reforms on capacity. The Expanded Index includes an additional variable that acknowledges the burden of servicing public debt. Source: Haver Analytics, RBC GAM current-account surplus that hints at the potential for seriously stronger economic demand.

Downside

At the opposite extreme, Exhibit 13 shows the six countries set to fare the worst. These are Turkey, Canada, Chile, the U.K., Australia and the U.S.

All six are technically living beyond their means, with the implication that, for them, the Economic Upside Index is really more of an economic downside index. Providing important perspective, however, no country has a major downside: Turkey maxes out at -4.1 percentage points, with the other countries sporting much milder -1 to -2 percentage point downsides.

Why do erstwhile emerging market darlings like Turkey and Chile fare so poorly? The index finds flaw in their large currentaccount deficits (indicating that demand is running well above the sustainable rate), sharply decelerating population growth and Turkey's large fiscal deficit. It is important to acknowledge that the countries examined in this report are all OECD nations, of which there are few emerging market members. We suspect that the inclusion of a broader set of emerging market nations would find plenty of others in similar shape – the simple reality is that developing nations did not suffer as much through the financial crisis, and so they have less upside today.

Why did the U.K. and the U.S. receive negative scores? The main reason is that they continue to run significant fiscal and current-account deficits. Secondary reasons for their lagging performance are that they have undervalued exchange rates and are engaging in fewer structural reforms than some of the others. It should also be conceded that they never had a serious

Exhibit 13: Countries with most economic downside



Note: These measures estimate the potential cumulative boost to demand over the next five years, beyond the normal trend growth rate for each country. The boost is assumed to come as current account imbalances, fiscal deficits, output gaps and residential investment gaps close, factoring in the effects of demographics, currency movements and structural reforms on capacity. The Expanded Index includes an additional variable that acknowledges the burden of servicing public debt. Source: Haver Analytics, RBC GAM hope of outscoring peripheral Europe, given relatively less economic suffering in recent years. We'll confess that our own qualitative view of the U.K. and the U.S. is more favourable than this.

The weakness projected for Canada and Australia makes a great deal of sense. These countries are like two peas in a pod, with resource-oriented economies that benefited from a decade-long commodity boom and sound banking systems that avoided the worst of the financial crisis. Inevitably, their economic outperformance in recent years now leaves less economic upside for the future. Compared to the pack, Canada and Australia have relatively smaller output gaps, less residential investment upside, significant current account deficits and abruptly decelerating population growth.

Proper interpretation

To reiterate, our findings don't mean that Greece will be the fastest growing of all the countries, or that Turkey will be the slowest. In fact, there is a good chance that Turkish growth continues to outpace Greek growth. But on a relative basis, Greece should accelerate while Turkey slows.

While this may sound like convoluted thinking, it matters enormously because it is how markets think. Financial markets discount expected economic and earnings growth for each country, with expectations regularly set in the context of historical growth trends. The countries that most ably defy their prior trend are those that should receive the greatest market reward. If Greece were to truly extract an additional 15.6 percentage points of economic growth over the next five years – representing a whopping 3.1 percentage points of extra economic growth per year above its prior norm – markets would be euphoric.

We'll confess that the Economic Upside Index doesn't align with several of our pre-existing views, including:

- It assumes the Japanese yen will appreciate substantially over the coming five years, whereas we suspect the yen could soften.
- It imagines that U.S. growth has little upside, whereas our sense is that the U.S. can enjoy superior growth over the next few years.
- It argues that Spain will enjoy a housing market renaissance, whereas we are unconvinced that the correction there is over.
- It assumes that Germany's big current-account surplus will vanish, whereas in our opinion, the single-currency system in the euro may prevent that from fully transpiring.

Does this mean the Economic Upside Index is a junk index? No – it offers an unblinking consistency and farsightedness that qualitative human analysis struggles to match. We need more measures like this.

So should we abandon our prior beliefs? Not necessarily. The Economic Upside Index is occasionally naïve due to its rigid construction, failing to consider relevant factors outside of its seven almighty inputs. Moreover, the Economic Upside Index will always need a human operator, if only to judge when the economic recovery is sufficiently underway that the mean-reverting processes so central to its functioning finally become relevant.

The bottom line is that a winning forecast demands multiple inputs – some human, some automated. The Economic Upside Index is a valuable addition to the forecasting toolkit, but not an outright replacement for other tools. We believe it is transmitting a useful reminder about the substantial economic upside in peripheral Europe, just as its message about limited upside for countries including Turkey and Canada may also warrant special heed. Information obtained from third parties is believed to be reliable, but no representation or warranty, express or implied, is This report has been provided by RBC Global Asset Management Inc. (RBC GAM Inc.) for informational purposes only and may not be reproduced, distributed or published without the written consent of RBC GAM Inc. In the United States, this report is provided by RBC Global Asset Management (U.S.) Inc., a federally registered investment adviser founded in 1983. RBC Global Asset Management (RBC GAM) is the asset management division of Royal Bank of Canada (RBC) which includes RBC Global Asset Management Inc., RBC Global Asset Management (U.S.) Inc., RBC Alternative Asset Management Inc., and BlueBay Asset Management LLP, which are separate, but affiliated corporate entities.

This report is not intended to provide legal, accounting, tax, investment, financial or other advice and such information should not be relied upon for providing such advice. RBC GAM takes reasonable steps to provide up-to-date, accurate and reliable information, and believes the information to be so when printed. Due to the possibility of human and mechanical error as well as other factors, including but not limited to technical or other inaccuracies or typographical errors or omissions, RBC GAM is not responsible for any errors or omissions contained herein. RBC GAM reserves the right at any time and without notice to change, amend or cease publication of the information.

Any investment and economic outlook information contained in this report has been compiled by RBC GAM from various sources. Information obtained from third parties is believed to be reliable, but no representation or warranty, express or implied, is made by RBC GAM, its affiliates or any other person as to its accuracy, completeness or correctness. RBC GAM and its affiliates assume no responsibility for any errors or omissions.

All opinions and estimates contained in this report constitute our judgment as of the indicated date of the information, are subject to change without notice and are provided in good faith but without legal responsibility. To the full extent permitted by law, neither RBC GAM nor any of its affiliates nor any other person accepts any liability whatsoever for any direct or consequential loss arising from any use of the outlook information contained herein. Interest rates and market conditions are subject to change.

A Note on Forward-Looking Statements

This report may contain forward-looking statements about future performance, strategies or prospects, and possible future action. The words "may," "could," "should," "would," "suspect," "outlook," "believe," "plan," "anticipate," "estimate," "expect," "intend," "forecast," "objective" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are not guarantees of future performance. Forward-looking statements involve inherent risks and uncertainties about general economic factors, so it is possible that predictions, forecasts, projections and other forward-looking statements will not be achieved. We caution you not to place undue reliance on these statements as a number of important factors could cause actual events or results to differ materially from those expressed or implied in any forward-looking statement made. These factors include, but are not limited to, general economic, political and market factors in Canada, the United States and internationally, interest and foreign exchange rates, global equity and capital markets, business competition, technological changes, changes in laws and regulations, judicial or regulatory judgments, legal proceedings and catastrophic events. The above list of important factors that may affect future results is not exhaustive. Before making any investment decisions, we encourage you to consider these and other factors carefully. All opinions contained in forward-looking statements are subject to change without notice and are provided in good faith but without legal responsibility.

 (™ Trademark(s) of Royal Bank of Canada. Used under licence.

 (© RBC Global Asset Management Inc. 2014



RBC Global Asset Management