THE GEORGIA FORECAST™

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Are forecasts possible?

It's tough to make predictions, especially about the future. –Yogi Berra

Dr. Edward Raupp
Chancellor and Professor of Economics, The University of Georgia
President, THE GEORGIA FORECAST™

"Forecasts are always wrong!" Is that a fair comment? In a sense, it is fair. If we look ahead and see an undesirable outcome, we make changes. So we improve the outcome.

It's been said that "Business and economic forecasting is like driving a car while looking at the rear-view mirror." That comment, too, has some merit. For the near term, at least, we believe that what will happen will probably look much like what has happened in the recent past.

With all their cautions and conditions, forecasts – and forecasters – are needed by decision-makers in business, economics, and public policy. That is why TGF exists.

In mid-June, I attended the 28th International Symposium on Forecasting in Nice, France. The presentations were as brilliant as the summer sun and blue Mediterranean Sea. Just when you think you know something about a subject, along comes a new cohort of scientists with new insights.

We will use some of these new insights in our forecasting model and we will explain them in this publication. A most gratifying discovery was that THE GEORGIA FORECAST™ is on the right track: combining statistics and judgment. And we are doing things that no other group is doing. We will be sharing those with you in this and future issues.

INSIDE THIS ISSUE

Who are the forecasters?

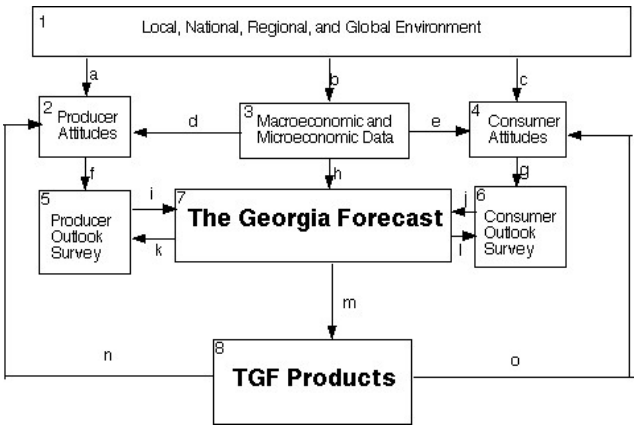
Everyone who makes decisions needs forecasts.

Tamta Khalvashi
Ph.D. Candidate, The University of Georgia
Executive Vice President, THE GEORGIA FORECAST™

You don't have to be a mathematician to be a forecaster! Of course, it helps if you can reason quantitatively, but we all do that every time we go to the market to shop.

For the most part, the TGF staff is composed of students and professors who are social scientists. For example, my specialty is anthropology. Some of our staff study business and economics, but others study – and teach – governance, humanities, information technology, journalism, law, public health, politics, and international relations.

In the last issue, we introduced TGF Model:



In this issue, and in future issues, we discuss the people who make the model a reality. At TGF, we believe that the future of Georgia is too important to be left to statistics. So we ask *people* to participate in the process.

The first group of people we discuss are the "scanners." Take a look on page 3 at those people and what they do. They are in the top block in the model, Block 1.

And a regular feature, on page 2 of this newsletter is our "Featured Staff Member." We don't claim that any one is more important than another. Instead, we want our readers to know a bit more about the *people* who make up the staff.

If this is your first issue of TGF, welcome! If you read the first issue, welcome back! We hope you will enjoy reading this issue as well as the first. It is twice the size of the first issue and has somewhat more detail.

As always, if you have suggestions, let us know.

TGF Index of Expectations

THE GEORGIA FORECAST™ combines a variety of methods to produce the most accurate forecast, that is, one with the lowest possible "forecast error." All of these methods assume that "the past informs the future."

In general, this is not a particularly harmful assumption, so long as we acknowledge the possibility of unexpected and serious events, what Nassim Nicholas Taleb calls "Black Swans." (More about black swans later.)

As the time horizon increases, that is, as we try to peer further into the future, the data from the recent past becomes less relevant, and our forecast error increases. TGF takes this problem into account in several ways.

First, we separate our forecasts into near-term, mid-term, and long-term. "Long-term" is less a forecast than a journey into the realm of scenarios, so short- and mid-term are the horizons best informed by data from the recent past.

Second, we use a variety of statistical techniques. These go by somewhat technical terms such as moving averages, exponential smoothing, multiple regression, and ARIMA (autoregressive integrated moving averages).

Third, we use judgmental methods. Most notably, these include a monthly survey of consumers and producers in Tbilisi and Gori. (We are now expanding the survey to other regions, as well.) Using the economic theory of "rational expectations," we relate the outlook of the public to the decisions they are likely to make in the near and mid-term future. (We discuss other judgmental techniques, as well as other methods, on pages 4-7 of this publication.)

We introduced our survey in the previous issue and presented what we called a *TGF Index of Expectations*. Table 1 shows the first 6 months of data, while Table 2 shows the most recent 5 months.

Table 1

TGF Index of Expectations, September 2007-February 2008

	Sep	Oct	Nov	Dec	Jan	Feb
Gori C	1.4	1.5	3.4	1.7	4.2	1.9
Gori P	2.2	1.3	1.7	3.3	7.0	1.8
Tbilisi C	--	1.6	1.6	3.0	4.2	1.2
Tbilisi P	--	1.5	2.1	15.0*	4.8	2.3

C=Consumer Outlook Survey *Outlier
P= Producer Outlook Survey -- not available

An index of 1 means that the same proportion of the population thinks things will be better a year from now as those who think things will be worse. An index greater than 1 means a higher proportion think things will be better. An index less than 1 means a higher proportion think things will be worse.

Table 1 shows a fairly high level of optimism holding steady in both Gori and Tbilisi and in both consumer and producer groups.

Featured Staff Member: Tamuna Abashidze

One of the unique components of our TGF model is the monthly outlook survey of consumers and producers in Tbilisi and in the regions. That extremely important – and difficult – job is the responsibility of The University of Georgia student Tamuna Abashidze, this quarter's Featured Staff Member.

Tamuna lives in Didi Dighomi. She has two brothers. Her father is an engineer and her mother is a full-time home maker, a true "home economist."

Upon completion of her schooling, at Georgian Orthodox Private School "Pesvebi" (Roots) in Didi Dighomi, Tamuna took the Georgian National Entrance Examination and scored at the top level, for which she received the highest stipend.

In her role as Senior Survey Manager, Tamuna supervises the Consumer Survey Manager, Producer Survey Manager, and Regional Area Manager. There are over 20 positions in her organization.

We salute Tamuna Abashidze as Featured Staff Member and recognize all those in the Survey Department who make possible this unique part of THE GEORGIA FORECAST.

Table 2

TGF Index of Expectations, March 2008-June 2008

	Mar	Apr	May	Jun	Jul
Gori C	6.6	4.8	2.2	6.7	4.4
Gori P	7.0	4.5	6.0	>10.0	10.0
Tbilisi C	2.1	2.8	3.1	3.4	1.1
Tbilisi P	1.1	1.7	2.0	2.3	2.3

C=Consumer Outlook Survey
P= Producer Outlook Survey

Table 2 shows a continued picture of optimism, both in Tbilisi and in Gori. This may be a bit surprising to some, as the Gori area is not experiencing the same growth as Tbilisi. One reason is that this is a survey of *expectations*, and people in Gori believe things will improve in the coming year.

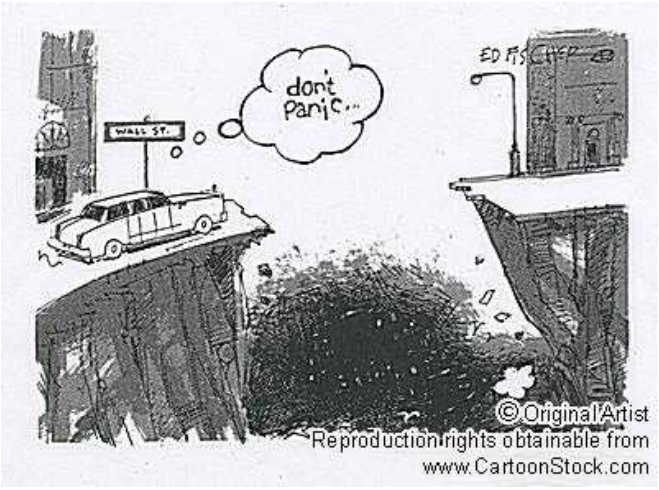
TGF Index of Expectations is an indicator of future growth of the nation but has only limited value in discerning the situation in the regions. In the coming months, we will be expanding the survey into more of Georgia's regions.

Scanning for data

Forecasting requires data. This is true not only for statistical, or quantitative, forecasts but also for judgmental methods. Most forecasting methods assume that the recent past can tell us something about the near future. So we need data from the past. For example, if we know the GDP for each of the past 16 quarters, we can use that data as part of the model that will predict GDP in the coming quarters.

TGF relies heavily on data. The data may be quantitative or qualitative. Data may be found in statistical summaries, such as those published by the Department of Statistics of the Ministry of Economic Development of Georgia.

They publish a *Quarterly Bulletin* in hard copy and on their web site <http://statistics.ge>. The National Bank of Georgia web site also has a great deal of data at their site: <httpwww.nbg.gov.geindex.phpm=306#makroindicat>.



A gap in the data!

What happens when there is a gap in the time-series data? This is often the case in nations without a long history of careful attention to economic data, such as developing and transitional nations. There are several techniques.

One method is linear interpolation, which assumes that you know two values in a series that is changing at a constant rate. One may simply add the values adjacent to the missing data point and divide by 2.

Older methods include such techniques as listwise and pairwise deletion. More modern approaches include multiple imputation and maximum likelihood estimation. When TGF encounters the "missing data problem," we use the most appropriate method for filling in the gap.

(See J. L. Peugh & C. K. Enders, Missing data in educational research: A review of reporting practices and suggestions for improvement, *Review of Educational Research Winter 2004, Vol. 74, No. 4,* 525-556.)

Who are the scanners?

In our page 1 article, "Who are the forecasters," we note the importance of those who scan the environment. Who are these people and what are they looking for?

All members of the organization are aware of the need to watch for news that might have an impact on the Georgian economy. But for many members, that is their primary responsibility. These are the Liaison Officers.

Working under the Vice President, Operations, the Senior Liaison Manager leads this critical function with the help of
--Senior Liaison Officer, Foreign Embassies
--Senior Liaison Officer, Georgian Parliament
--Senior Liaison Officer, Ministries of Georgian Govt.
--Senior Liaison Officer, National Bank of Georgia
--Senior Liaison Officer, Non-Government Organizations
--Senior Liaison Officer, Government Organizations
--Senior Liaison Officer, Commercial Organizations

There are about 75 liaison officers in the organization.

Under the Vice President, Marketing, scanners go under names such as Senior Product Manager and Product Managers for
--Economic Indicators --Gross Domestic Product
--Employment --Inflation
--Exchange Rates

In all of these positions, students – and most of those involved in environmental scanning are student volunteers – visit their organizations, either in person or in cyberspace. When there is news that might help us to modify our forecast, they bring that information to the organization. In the process, students learn economics by doing economics.

Scanning the environment is a full-time activity. Events occur all the time that may have an impact on the economy. The difference between straight statistical forecasting and TGF is that we collect and find ways to integrate current news into the model.

TGF Does Custom Forecasts

The staff at TGF work closely with University of Georgia Business Consulting Company.

UGBC provides over-all consulting services in general management, administration, financial management, human resources management, marketing, and production.

TGF offers highly specialized forecasting tools to UGBC and its clients.

Visit UGBC at http://www.ugbc.ge. E-mail:info@ugbc.ge.

Contact Maria Giorgadze at ug@ug.edu.ge to arrange for a free initial consultation to see how you can use our forecasting capabilities.

Statistical methods

The most commonly used statistical forecasting technique is probably what might be called the "naïve model." This is simply that we think the next period will be the same as the current period. For example, if the gross domestic product (GDP) grew by 12.5% last year, then we project the current growth rate also to be 12.5%. Symbolically, this is:

$$\hat{Y}_{t+1} = Y_t$$

where Y_t is the most recent observation of a variable,

and $\hat{Y}_{t+1}$ is the forecast for one period in the future.

Another common technique is the linear extrapolation. One can use standard statistical methods, such as Ordinary Least Squares (OLS), to draw a trend line. Then one can simply use the trend line to make a forecast. This technique is fine if there is little fluctuation in the underlying variables.

The slope-intercept form of the straight-line equation is $y = mx + b$, where m is the slope and b the y-intercept.

Another approach is to average some past observations. This might be, for example, a simple average of the past two or more actual values. For the technically minded,

$$\hat{Y}_{t+1} = \frac{1}{t}\sum_{i=1}^{t} Y_i$$

A variant is the *moving average*, in which more recent values are added as earlier observations are dropped:

$$\hat{Y}_{t+1} = \frac{Y_t + Y_{t-1} + \cdots + Y_{t-k+1}}{k}$$

where k is the number of terms in the moving average.

Another variant of the averaging approach is *exponential smoothing*, in which the most recent observations are given more weight than earlier data:

$$\hat{Y}_{t+1} = \alpha Y_t + (1-\alpha)\hat{Y}_t$$

where a is the weight applied to the most recent value.

There are other statistical approaches, more than we have space for in this publication. For further information, see:

Armstrong, J. S. (2008). *Forecasting principles: Evidence-based forecasting.* http://www.forecastingprinciples.com

Hanke, J. E., & Wichern, D. W. (2009). *Business forecasting.* 9th ed. Upper Saddle River, NJ : Pearson Prentice Hall.

Jones, C. I. (1998). *Introduction to economic growth.* New York: W. W. Norton.

Makridakis, S., et al. (1998). *Forecasting: Methods and applications.* 3rd ed. Hoboken, NJ: John Wiley & Sons.

Statistical forecasting. (2008). http://www.statisticalforecasting.com.

Studenmund, A. H. (2006). *Using econometrics.* Boston: Pearson/Addison Wesley.

Judgmental methods

The column to the left is headed "Statistical methods," and many people believe those are the only ways to forecast. Not so! In fact, most forecasting is based on judgment.

Everyone forecasts. We forecast the weather before we go outdoors. We forecast all the time. But we don't always use statistical methods. Most of the time, we use judgment.

Statistical methods rest on certain assumptions: e.g., past patterns or relationships will not change during the period to be forecasted. But conditions do change.

Judgmental methods do not make the same assumptions. But they make other assumptions: e.g., the people making the judgments are in full (or nearly full) possession of the relevant facts. The weakness of this assumption is shown by research that shows, "The accuracy of judgmental forecasts is, on average, inferior to statistical ones" (Makridakis, et al.).

But a combination of statistical and judgmental methods may improve the forecast that uses only one approach.

TGF uses several judgmental methods to supplement the statistical forecasts:

- ✔ Decision trees
- ✔ Delphi method (see page 5)
- ✔ Game theory
- ✔ Multiple Alternative Scenario Analysis
- ✔ Surveys

Other judgmental methods include:

Best guess
Conventional wisdom
Genius forecasts
Intuition
Naïve forecasts (i.e., no change)
Prediction markets (See note below.)*
Role playing
Salespeople forecasts

Some advanced research is being done in the area of Artificial Neural Networks (ANN). For more on neural net forecasting, see http://www.neural-forecasting.com.

Of course, there are always crystal balls, astrology, and Tarot cards, but these are delusions rather than science.

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* Prediction markets are relatively new to the world of forecasting. They work like this: Suppose you think that a presidential candidate has a 40% chance of winning; you can buy a share of that candidate for $40. If some good news raises the probability to 50%, you can sell your share for $50 and make a $10 profit. Studies show that this approach may result in greater forecast accuracy than other judgmental methods. TGF is exploring this technique.

TGF goes to Delphi

This page is more than it seems. Yes, it has lots of Greek lore, but it also introduces one method of "judgmental forecasting." TGF is a *system*. We use a medley of techniques, combining traditional and modern methods.

As we note on page 4, forecasting methods fall into two categories: (1) statistical and (2) judgmental. Elsewhere in this issue, and in the future, we discuss statistical techniques, including econometrics. But in this column, we discuss the second category.

Delphi method is used when the event or condition to be forecasted is highly uncertain and not subject to the standard statistical methods that depend on data from the recent past. The principal advantage of the Delphi method is that it uses the knowledge of experts. We ask a question and members of the panel give their judgment. We then share with members the judgment of other experts and ask if they want to change their estimates. Typically, after two or three rounds, there tends to be a convergence about the mean. Features include: (1) structuring of information flow, (2) feedback to the participants, and (3) anonymity for the participants.

Temple of Apollo at Delphi, photo by Francis E. Lusier

The Delphi method has its detractors:

> Makridakis and Wheelright in 1978 summarized the general complaints against the Delphi method in terms of (a) a low level reliability of judgments among experts and therefore dependency of forecasts on the particular judges selected; (b) the sensitivity of results to ambiguity in the questionnaire that is used for data collection in each round; and (c) the difficulty in assessing the degree of expertise incorporated into the forecast. [Source: http://www.iit.edu/~it/delphi.html]

So Delphi is not perfect, but in that criticism, the method is in good company.

Who was the Pythia?

…and why do we care? To start, let's go to Delphi, an ancient and modern city in southern Greece. The ancient Greeks revered Delphi as the center of the world and of the universe. The Pythian Games were held there every 4 years, a model that would be used by the Olympic Games.

Pythia was the original name for Delphi, and "the Pythia" sat on a tripod in the Temple of Apollo and forecasted. She is often called "the Delphic Oracle." It was to the Oracle that King Laius and Queen Jocasta of Thebes took their son only to learn that Laius "is doomed/To perish by the hand of his own son." Hello, Oedipus!

Aegeus, a mythical king of Athens, consults the Pythia, who sits on a tripod. An inscription on the cup identifies the Pythia as Themis. Tondo of an Attic red-figure kylix, by the Kodros painter, ca. 440-430 BC, now in the Berlin Museum (Berlin Mus. 2538). This is the only contemporary image of the Pythia. [Source: http://en.wikipedia.org/wiki/Pythia]

The Pythia was never wrong, but she had to be coaxed, and she didn't always tell the whole story. When Lydian King Croesus asked the Oracle if he should attack Persia's King Cyrus, he was told that if Croesus attacked the Persians, he would destroy a great empire. He attacked and destroyed a great empire – his own!

Why do forecasters care about ancient Greeks? Because "Delphi" is the name given to a method developed by "Project RAND" that uses group judgments to forecast events and conditions where there is great uncertainty and where statistical methods are not valid, for example, the impact of technology on warfare.

TGF uses the Delphi method to help with forecasts of GDP and inflation, among other variables. We will also be using it for long-term forecasts, 20-30 years in the future.

A TGF panel of experts is composed of leaders and specialists in business, government, and other areas. They receive regular messages asking for their judgments and they get feedback from the other panel members and have a chance to revise their forecasts. It's another way TGF uses to determine with greater accuracy the key variables in the forecast.

Multiple scenario analysis

Statistics are not always the best way to predict for the long-term.

A moving average of the past few months may tell you something about the next few months, but it is fairly useless in predicting the state of nature 20-30 years from today. We need other methods.

One of these methods is *scenario analysis.* While we cannot forecast with any great accuracy events or conditions where there is a high degree of uncertainty, we can ask, "What if?"

This is the basic approach in scenario analysis. We ask, "What if the following conditions are present?" Or, "What if one or more of the following events occur?"

Application of the method relies on the old Boy Scout motto: "Be prepared." If we cannot know what will happen, we can at least prepare for a set of events or conditions.

Multiple Alternative Scenario Analysis takes its most familiar form in the "Best Case, Most Realistic Case, Worst Case" model, or "Optimistic, Realistic, Pessimistic." Such terms, however, may be misleading. A more useful typology might be simply to specify the characteristics of each scenario.

For example, one scenario (A) might be "Georgia joins NATO and EU by 2018"; a second, (B) Georgia joins NATO but not EU by 2018"; and a third (C) Georgia joins neither NATO nor EU by 2018." One can then add specifics to each scenario. After the scenarios are drawn, one can apply *a priori* probabilities to the scenarios and each of the specifics. Given the probabilities and the values of possible outcomes, one can then calculate *expected values.*

Decision makers can use these values to prepare, either to reduce the consequences of negative outcomes or to take advantage of opportunities in positive outcomes.

Microsoft Excel has a function called Scenario Manager that may be useful in fine-tuning the scenarios. In Excel 2003, select Tools/Scenarios. In Excel 2007, select Data/ Data Tools/What If Analysis/Scenario Manager. Before getting to that point, work the larger problem of thinking about "What could happen?" The answers to that question lead the way to the alternative scenarios.

A Note from the Sponsor

The University of Georgia is sponsoring a **Georgian Economic Association.** This would be a free association of economics practitioners, professors, and students with the general aim of raising the standards of modern market economics research and education in Georgia.

We are also forming a **Georgian Futures Association**, an interdisciplinary organization of persons with an interest in futures research in all areas, including technological, social, political, cultural, and economic affairs.

Anyone who is interested should contact Dr. Edward Raupp at edraupp@gmail.com.

Ups and downs

*Our estimate of the effect of events on Georgia's real GDP growth.**

Bank of Georgia launches brokerage company	↑
Coca-Cola Jazz Festival attracts thousands	↑
Commodities prices rise worldwide	↑
Construction of 105-km BAK Railway is underway	↑
Customs Risk Management project started	↑
FDI to Georgia up slightly in 1st quarter 2008	↑
Liquidity increases in banking sector	↑
NBG leaves 1-week CD rate at 12% (no rise)	↑
Parliament increases budget by 3.5%	↑
TGF surveys positive for 10 straight months	↑
US Secretary of State Rice visits Georgia	↑
Worldwide food prices rise	↑
BP shuts down Georgian pipeline.	↓↓
Georgia's credit rating downgraded.	↓↓
NBG forecasts 8% inflation in 2008.	↓
NBG raises interest rates	↓
NBG sells some government obligations	↓
Oil prices hit record high level	↓
Russia attacks Georgia, bombs cities	↓↓
US housing market declines	↓
Worldwide economy is in a slump	↓

*Notes:
An up arrow ↑ may imply inflationary pressure.
A down arrow ↓ indicates slower real GDP growth.
NBG: National Bank of Georgia

Recent Forecasts from World Future Society (WFS)

WFS forecasts the following:

- The world will have a billion millionaires by 2025.
- Counterfeiting of currency will increase; therefore,
- The world will move toward a cashless economy.
- The U.S. fiscal balance will worsen.
- Microfinancing will help recovery after disasters.
- U.S. jobs will require more higher education; therefore,
- Income disparity will grow, as many families can't afford higher education.
- Infant mortality will grow with higher HIV/AIDS rates.
- Global oil production will peak by 2020.
- 30% of global energy will come from alternative energy sources by 2020.
- Global crude oil demand will grow over 40% by 2025.
- Biobutanol will gain in popularity over ethanol.
- 30% of biodiesel fuels will come from algae by 2020.
- Over 1.1 billion vehicles will be on the road by 2025.
- Human knowledge capability will double every year.

Georgia's long-term prospects

There's an old saying, "When the United States sneezes, the rest of the world catches cold." We might add, "When the United States catches cold, the rest of the world catches pneumonia."

The current melt-down of the U.S. economy is more serious than a case of pneumonia. It's a fall in the American economic empire, which has been in decline since the 1980s, when soaring national debt started the U.S. on an irreversible slide. The impact on the Georgian economy is both direct and indirect.

Georgia's trade with the U.S. is relatively small, but we do business in nations that have large trade dealings with the U.S. A contracting U.S. economy means Americans will buy less from Georgia and our trading partners. It also means lower investment by U.S. businesses in Georgia and lower levels of aid by the U.S. government.

Nihau! Hello, China!

A new report from Carnegie Endowment for International Peace says the growth of the Chinese economy over the past several years is "no flash in the pan." The forecast is that the economy of China will surpass the U.S. economy by 2035 and double by 2050. Therefore, TGF believes that

✪ ***Georgia's long-term prospects will be enhanced by strong ties to the Chinese economy.***

Most countries maintain relatively large portions of their national reserves in U.S. dollars. Those reserves have lost about 40% of their value over the past 7 years. It is likely that some of these countries will sell off their dollars for more stable assets, e.g., euros, yen, Swiss francs, or gold.

✪ ***Georgia's long-term reserve position will improve by selling off dollars.***

The 3 Imperatives Still Apply

Education. **Health Care**. **Technology**. Without these, a nation cannot develop. Reforms over the past 5 years in the area of education, especially national entrance examinations and local school boards, represent a good start. However,

✪ ***Georgia's education sector can, if focused, make major contributions to economic development.***

The greatest public health hazard in Georgia is smoking. According to the Georgian National Association of Cancer Control, "Smoking is considered as the main risk factor, causing lung cancer" [www.nacc.org.ge]

✪ ***Georgia's long-term economic health will improve as its use of tobacco declines.***

Even a well-educated and healthy work force cannot be productive without technology. With technology, human beings rose from the Stone Age to the Information Age. Without steady increases in the power of ideas, we stagnate.

✪ ***Georgia's use of modern technology will determine its long-term growth rate.***

Our forecast

Initially, TGF concentrated its efforts at forecasting *Real GDP Growth Rate*. It is this figure that best describes the overall health of the Georgian economy. In general, as this rate rises, the number of jobs increases and unemployment falls. *Real* means that the growth rate has been adjusted for inflation. *GDP* is Gross Domestic Product, the final value of all goods and services produced in Georgia during the period, usually a quarter or year.

TGF's first forecast was that Georgia's real GDP in 2007 would grow at about 13%. Other forecasters projected about 8%. The actual figure reported by the Ministry of Economic Development (MED) was 12.4%.

MED reported an inflation rate in 2007 of 11.0%. The Government of Georgia has announced a target of 8% for 2008. This, combined with the extraordinary growth rate of the previous year, leads TGF to forecast a slower rate of real GDP growth for 2008.

✪Pre-invasion: ***Georgia's real GDP will grow at 8-10% in 2008. (Delphi Expert Panel Forecast: 10.4%)***

✪Post-invasion: ***Georgia's real GDP will grow at 4-6% in 2008. Reflects closing of pipeline, lower FDI, and higher risk for investors.***

TGF in this issue expands its scope to include inflation. While the country's central bank, the National Bank of Georgia, engages in aggressive contractionary monetary policy, increased spending on the fiscal side will offset some of the effect of the NBG measures.

✪ ***Georgia's inflation rate will be 10-12% in 2008. (Delphi Expert Panel Forecast: 12.4%)***

In future issues, TGF will forecast additional variables, including sectors of the economy:

Agriculture, Forestry, Fishing
Mining and quarrying
Manufacturing
Electricity, gas and water supply
Processing products by household
Construction
Trade services, Repair services
Restaurant and Hotel services
Transport and storage
Communications
Financial intermediation
Real estate, renting and business activities
Inputted rent of own occupied dwellings
Public administration and defense
Education
Health care and social Services

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Subscriptions
THE GEORGIA FORECAST™
77 Kostava Street, V Building
Tbilisi 0175, Georgia

For further information contact:
Dr. Edward Raupp, edraupp@gmail.com

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Your Comments

TGF wants to hear from you!

Everyone is an economist. Everyone makes decisions about how to allocate scarce resources. So everyone has opinions about the economy. We want to hear yours.

Every month, TGF staff surveyors go out to the people in Tbilisi and Gori. We ask their opinions in a structured way. Now you have an opportunity to give us your comments in free form. Send your comments to edraupp@gmail.com.

TGF and The University of Georgia

A mutually beneficial partnership

THE GEORGIA FORECAST™ (TGF) grew out of the Forecasting Project of The Center for Advanced Research (CAR) of The University of Georgia (formerly known as Georgian University of Social Sciences). The CAR mission is to support the work of the University's doctoral candidates and others engaged in the process of creating new knowledge.

TGF was created as an Ltd. with its own mission, to conduct and publish research that will assist decision makers in the economic development of Georgia.

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