proleads

Profit from our Knowledge

Insights

United Arab Emirates

An Investigation into the Current and Future State of the Construction Industry

January 2009

US$ 690

Table of Contents

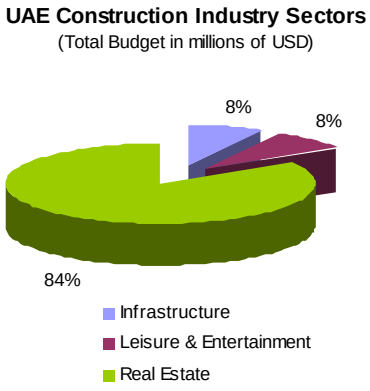
Executive Summary

Almost all processes in the natural world oscillate through birth and death cycles. An economy, or industry, also changes from a state of prosperity to a state of recession, back to a state of prosperity and so on. In times of economic turmoil one often finds industries in the transition between these two conditions. This is indeed the case in the current global economy.

This report attempts to quantify the current and future state of the civil construction industry in the United Arab Emirates, while also considering how the industry is changing as it migrates from prosperity through recession and back to prosperity.

> "…economies oscillate between states of prosperity and recession…"

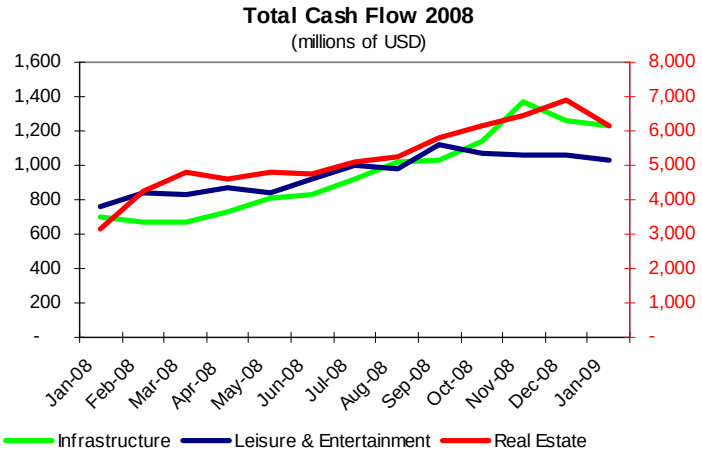
In order to quantify this transition, the industry is segmented into three sectors: Real Estate, Leisure & Entertainment and Infrastructure. Only formal projects are considered, with the financial size of the industry described in budgetary estimates as well as cash flow per month in millions of United States Dollars (USD).



The report finds that the entire industry at mid January 2009 consisted of 1,289 projects totalling USD 1.28 trillion. In terms of cash flow, USD 11.2 billion is projected to be spent in January 2009; approximately 1% of the total budget. The data suggests that projects are placed on hold rather than cancelled, implying that budgets tend to be spent at some future time. It also finds that, in spite of 52.8% of the total current project portfolio being on hold, USD 698 billion is still in operation.

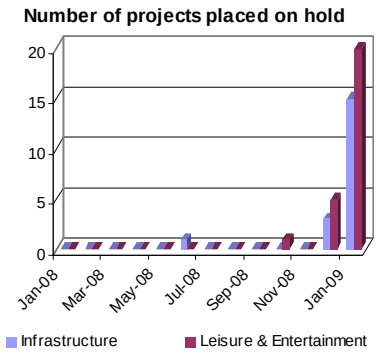
An analysis of completed projects finds that more than half of all projects are late, but that budgetary spend rarely changes as a result.

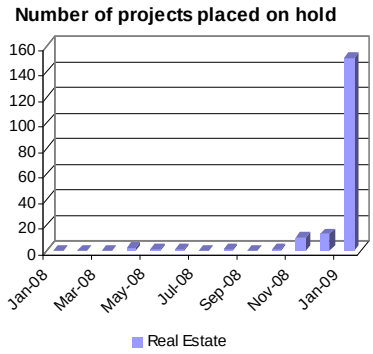
All sectors experienced growth in cash flow over the greater part of 2008, but all sectors saw declines in cash flow spend during the last quarter of 2008. (The Real Estate sector is to be referenced against the axis on the right hand side.)



All sectors have seen a decline in the rate at which new projects are added at the close of 2008. Although numerous projects are scheduled for completion in early 2009, the rate at which projects complete has slowed during the last quarter of 2008 in the Real Estate sector, while remaining relatively unchanged in the other sectors. In the Infrastructure sector, the size of new projects is typically bigger than those that complete. In the Leisure & Entertainment sector, the size of new projects is typically smaller than those that complete. The size of Real Estate projects that complete and start are approximately the same.

A sharp increase in the rate at which projects are placed on hold is observed across all sectors in the industry; this trend is summarised for 2008 in the graphs on the right.

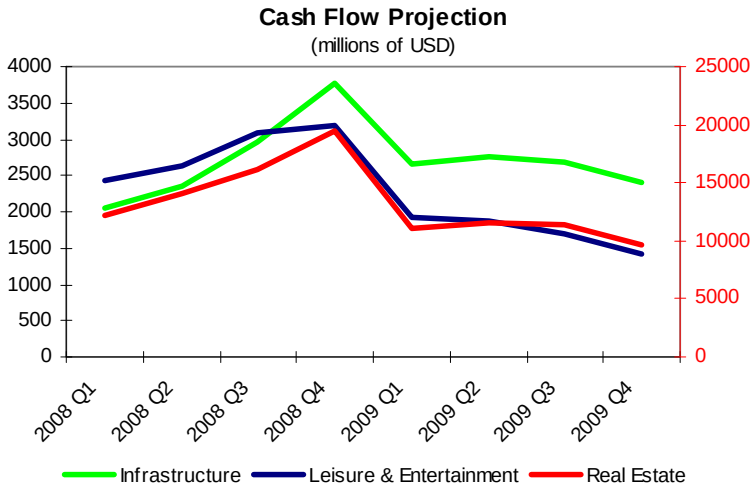




The data suggest that only 2.4% of projects are cancelled in the UAE, with 10.6% of the total budget typically being spent before a project is cancelled.

The projected future state of the industry

The cumulative effect of projects completing, being cancelled, projects being placed on hold, as well as the effect of new projects being added to the industry is summarised in the figure. Please consider the Real Estate sector using the red axis on the right. The change from the end of 2008 to 2009 is summarised in the table below:



Sector	Change in Budget	Change in Cashflow
Infrastructure	-13%	-36%
Leisure & Entertainment	-5.43%	-56%
Real Estate	-7.03%	-50%

Although the industry - in terms of cash flow - is projected to decline significantly, in terms of budgetary size the industry remains relatively healthy. Given that the nature of the industry is that projects do not tend be cancelled easily, it creates a pool of money that will most probably be spent in future.

Defining the problem

"The UAE has a solid economic base that can withstand the effects of this crisis.

This crisis is temporary, however long it will be, and the oil producing countries must be prepared for a high rise in global demand when the world markets recover."

His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, 23 December 2008

Expenditure in the construction industry of the United Arab Emirates (UAE) has seen a dramatic decline during late 2008, or such is the perception. A number of questions plague the industry:

Is this perception true?

If so, what has caused the decline?

Will things get worse? How much worse? How quickly?

How long will it take for the industry to recover?

Can the effect of the decline be reversed? How?

This report aims to answer these burning questions by

1. presenting the current size of the construction industry within the UAE
2. exploring how behaviour in the industry has changed of late, in addition to quantifying the impact of that changed behaviour on the industry itself
3. projecting the future state of the construction industry's various sectors by using a statistical mechanism based on quantitative and qualitative data collected and processed by Proleads Global

It should be noted that the report aims to provide insight into the industry dynamics and is statistical in nature, rather than being a pure economic analysis. Certainly, enhancements can be made to the model and those comments, suggestions and requests are most welcome – one may log them on the Proleads website at www.projectsandleads.com/proscope/feedback.html

Approaching the problem

A good way to find solutions to a problem is to start by defining what the "building blocks" of the problem are. The second step is to understand how those blocks are related and in what way they influence the problem. Finally, one is in a position to understand what drives the problem, and also what to do to solve the problem.

"…define the problem…

…find the drivers…

…then gain insight…"

This section of the report explores the construction industry, defines key drivers of the industry and provides the context from which the analysis in this report should be viewed. In order to provide insight into the questions posed in the previous section, this report presents a scientific way of thinking as opposed to a pure economic perspective.

Defining the construction industry

The scope of this report is limited to the civil construction industry in the UAE. Data for the 2008 calendar year and January 2009 are used when considering history, while projections extend to 2009.

When one starts to think about the concept of "construction" a few questions come to mind: Do the objects being constructed differ significantly? Is building a road as opposed to a hotel affected in the same way when the economic situation changes? Is the "industry" limited to formal projects or do small ad-hoc jobs at home also count? Are more expensive projects impacted on in the same way as less expensive ones? One can ask many more questions like these. This report considers only formal projects in the UAE, with those projects classified into three broad industry "sectors":

1. Infrastructure

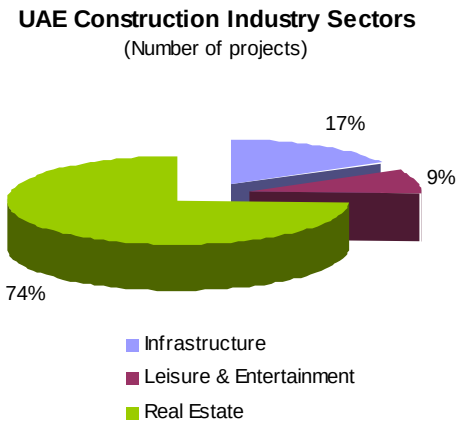
   Examples include the construction of roads, railways, bridges, ports, educational and healthcare facilities.

2. Leisure & Entertainment

   Examples include the construction of sports facilities, theme parks and hotels.

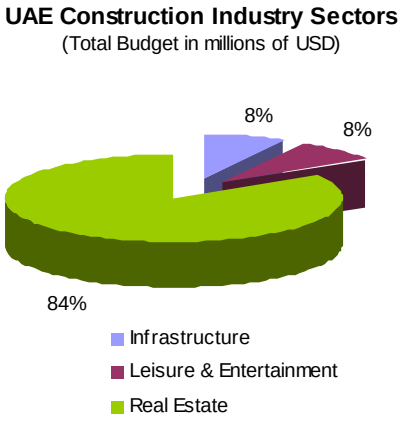
3. Real Estate

   Examples include the construction of residential, commercial and retail buildings.



Describing the industry quantitatively

This report will use a number of indicators to determine the contribution each sector makes to the industry as a whole. The first is the composition of the industry in terms of the number of active projects per sector. Another is the industry composition in terms of total budget (in United States millions of Dollars, USD hence). The pie chart on the previous page provides a snapshot of active projects per sector mid January 2009. The chart on the right shows the industry composition in terms of total budget (millions of USD) as at mid January 2009.

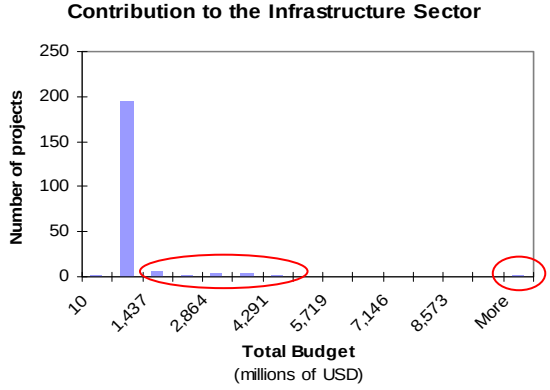


Observe that sectors contribute differently to the industry when considering total budget value vs. the number of projects in that sector. From the two pie charts above one notes that, for example, 74% of projects are found in the Real Estate sector, but 84% of the total industry budget is spent on them as opposed to 17% of projects in the Infrastructure sector contributing only 8% to the industry in terms of value. This does not necessarily mean that Real Estate projects are more expensive than Infrastructure projects. The implication is simply that there is more construction activity in the Real Estate sector when compared to the other sectors.

Other considerations include the time value of money (is a dollar today worth the same as a year ago?) and what the financial figure actually is (total budget vs. money already spent for example). In terms of this report, all financial data presented will distinguish between total budget figures as opposed to money spent in a certain month. Financial values are not discounted over time.

Exploring concepts, terms and some analytical methods

A "construction project" from the point of view of this report is a formal endeavour to construct a tangible object within the UAE, where the construction of that object requires a license from one or more UAE Departments of Government.



An "active" project is one which is not on hold, cancelled or completed. This concept of project status is used frequently in the report going forward. The financial impact, or size, of the project is also of great importance. Considering the distribution of project budgets within the Infrastructure sector, one finds that a few projects contribute greatly to the total budget

for that sector (circled in red), while most projects contribute smaller amounts. This is the case in all sectors.

The big contributors to the sector clearly skew the average size of projects in terms of budgetary spend. These will be isolated in analyses and will be referred to as "abnormal" in this report. (In statistical terms, the Normal Distribution, or more commonly known as the "Bell curve", is used to determine when a project is not within the "normal" range.)

In order to test whether more expensive projects are impacted on differently by the financial downturn than less expensive ones, each sector needed to be broken down by project size. Total project budget amounts were used for this purpose. Projects deemed to have a "normal" budget were further segmented into four groups using an "isochrome" model. In essence, the model aims to have a similar number of projects within each group. For example, the first 25% of projects, when ordered in ascending order of the total project budget, will form part of the first group, while the next 25% (approximately) of projects will fall into the second group, and so on.

"…the budgetary size, cash flow, as well as the status of the project should be considered…"

The budget total for every group thus varies while the number of projects per group remains approximately constant. In this way abnormally expensive projects are treated separately while the normal projects are segmented into almost equal groups for further analysis.

Knowing what the total project budget is, is however of lesser importance than knowing when the money will be spent. It is important to understand – for each project in each sector - when and how much cash flow, as collectively these figures provide a true indication, *at any given time*, of the size of the three sectors that make up the construction industry.

In summary, the size of the budget and cash flow of the project over time, as well as the status of the project will be explicitly considered in the analyses.

Considering the rate of change

While the size of the industry is a key factor to consider, it is just as important to know how fast and by how much the industry is changing. One important question is how many projects are on hold at any given point in time. Projects have always been put on hold for whatever reason – even in times of perceived prosperity. If, however, the *rate* at which projects are placed on hold increases, it is indeed an indication of potential trouble in the industry.

"…if the *rate* at which projects are put on hold *increases*, trouble is at hand…"

A project is assumed to change in status only when it is in one state in a particular month and in another state the next month. In order to understand the impact of changing project status, the change needs to be related to cash flow. This is important, as the industry size is defined as the *cumulative monthly cash in-flows into and cash out-flows from the industry*. The state of the industry therefore has to be related to the state of the projects that make up that industry. A project that has been cancelled, for example, no longer produces any cash in or out flows and is therefore no longer considered when considering the size of the industry in this report.

A change in project status has a significant effect on the cash that flows from the project:

- Cash out-flows
    - When a project is completed or cancelled, no more cash will flow from the project.
    - When a project is placed on hold, no cash will flow in or out for the time the project is on hold.
    - The amount of cash already spent cannot be recovered when the project is placed on hold or is cancelled.
- Cash in-flows
    - New projects are a source of cash flowing into the industry.
    - When a project was on hold and is restarted, the cash in the industry increases again from that point forward.

How does one determine how much cash will flow when? Proleads Global has developed a proprietary profile of construction projects in the UAE. This profile is used to spread the budget over project start and completion dates. Proleads occasionally conducts internal assessments about the accuracy of the profile. The latest study has shown the model to be around 94% accurate.

Numerous other factors drive the change in the market:

Is project completion being expedited? Is more being spent to achieve it?

If a project is placed on hold, how often is it eventually cancelled?

Are projects cancelled without being placed on hold first?

Are enough new projects flowing into the market to replace the completed ones?

All these and other dynamics are considered in this report.

Where do the data originate from?

Proleads Global has distinguished itself as a leading research house, operating across 20 countries. A team of researchers is constantly gathering data on new project registrations, current project status changes, budget adjustments and so forth.

"…data accuracy is estimated at 90%…"

This data is captured and updated daily as new information becomes available. Given the accuracy of the project profile on average (94%) and the efficiency of our team, the accuracy of all the data is estimated at 90%. This repository of information is used to deliver the size and status of projects.

The rate of change is calculated by considering the changes in status over time, also in that database. Other sources of information, like economic reviews and local news are also used to gain insight into industry drivers.

…individual project details and status are available…

The status of projects within the current portfolio of the UAE is also available in a separate work at www.projectsandleads.com

These details are available to customers who subscribe to Proleads.

The status quo

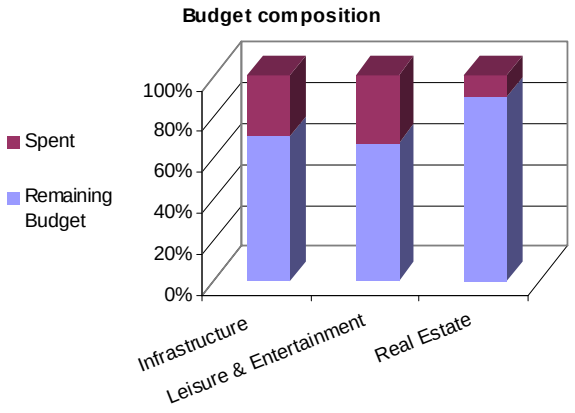
While the previous section of this work introduced key concepts, considerations and a way of thinking about the construction industry, this section applies those concepts in conjunction with available information to derive insights into the state of the construction industry in the UAE and how it is changing.

The size and nature of the current industry

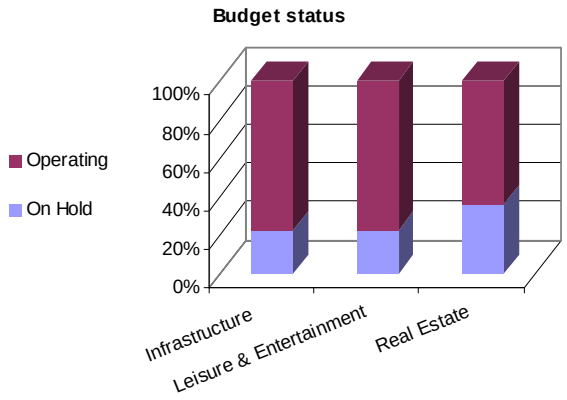
The table below summarises the state of the industry as at mid January 2009 in terms of total cash flows. As positioned earlier, the construction industry consists of a number of sectors with each sector being segmented first into abnormally expensive projects ("abnormal"), after which the remaining projects ("normal") are classified into four "size isochromes" based on total project budget:

Sector	Size	Number of active projects	(millions of USD)		
			Cash flow Jan 09	Total Budget	Individual Project Budget ranges
Infrastructure	Abnormal	3	27.1	17,164	3,031 to 10,000
	Percentiles 0 to 25	34	30.3	808	10 to 33
223 projects	Percentiles 25 to 50	53	102.9	2,837	33 to 75
1,351 millions of USD	Percentiles 50 to 75	56	234.6	6,377	75 to 160
1.77% of budget spent p/m	Percentiles 75 to 100	77	956.0	49,183	160 to 3,031
Leisure & Entertainment	Abnormal	2	516.2	40,978	3,000 to 21,978
	Percentiles 0 to 25	24	17.9	989	10 to 57
113 projects	Percentiles 25 to 50	28	34.0	2,253	57 to 110
1,298 millions of USD	Percentiles 50 to 75	27	220.1	4,891	110 to 250
1.58% of budget spent p/m	Percentiles 75 to 100	32	509.6	33,190	250 to 3,000
Real Estate	Abnormal	14	1,563.2	539,046	14,500 to 95,000
	Percentiles 0 to 25	164	174.0	6,374	10 to 55
953 projects	Percentiles 25 to 50	229	407.4	18,766	55 to 110
8,559 millions of USD	Percentiles 50 to 75	264	1,116.3	48,501	110 to 280
0.80% of budget spent p/m	Percentiles 75 to 100	282	5,298.4	456,070	280 to 14,500
	Total	**1,289**	**11,207.9**	**1,227,427**	

The "Cash flow Jan 09" column shows the estimated cash in millions of USD that flowed "in" during January 2009, while the "Total Budget" column represents the sum of the budgets of all projects in the relevant segment. Data contained in the "Individual Project Budget ranges" display the minimum and maximum budget values across all projects within the relevant segment. The graph on the right summarises how much of the total budget has been spent (mid Jan 09).



The remaining budget is composed of operating projects and projects that are on hold. The graph below provides a snapshot of the breakdown of the remaining budget into projects that are operating or on hold as at mid January 2009.



When considering the amount of budget not spent, it is found that 52.8% of the industry is on hold at the end of January 2009. This calculation equates to the size of the sector multiplied with the proportion on hold, expressed as a percentage.

"…52.8% of budgets not yet spent are on hold…

…USD 698b is still active…"

Another key statistic of interest is the chance of a project being cancelled after it has been placed on hold. Should one only consider projects placed on hold during 2008 and January 2009, only 1.5% of those were eventually cancelled.

"…1.5% of projects placed on hold are cancelled,

0.9% are just cancelled…"

Interestingly, only 0.9% of projects were cancelled without having been placed on hold first.

One may conclude that the chances of a project being cancelled do not depend greatly on whether that project is on hold or not.

A large portion of the industry is on hold but it seems that projects are not easily cancelled. However, one needs to test if this trend has changed of late; please refer to a later part of this document.

Given the conclusions above, the effect on cash flow when considering projects that are placed on hold thus relates mostly to *when* the money is spent, and not *if* it will be spent.

Another key aspect that must be understood when considering project spending is whether projects tend to be expedited, since money is typically spent faster, slower, more or less in these cases. A way to test this is to compare project target completion dates with actual completion dates for projects completed during 2008 in the UAE.

An interesting consideration is if, and to what extent, target dates tend to change during project execution, and whether date changes lead to changes in the total budget of project. The table on the next page summarises the nature of the market in this regard.

It is found that more than half of completed projects were late, with Infrastructure projects being almost guaranteed to be late. Within the Leisure & Entertainment sectors target dates tend to shift aggressively.

Interestingly, it was found that the budget for only one project in the Leisure & Entertainment sector was changed during the project (by a significant +264%), and five projects within the Real Estate sector, by an average of +49%. The effect on cash flow is therefore affected by timing but not so often by project size when considering project tardiness.

"…only 36.1% of projects complete on time, 50.9% are late…

… budgets are not often affected, but greatly so when they are…"

The following table summarises the change in project budget and duration for projects completed during 2008:

Sector	Size	Number of projects completed (2008)	Average change in target date during project	Average project duration (days)	Project lateness		Project earliness	
					Probability	Average days late	Probability	Average days early
Infrastructure	Percentiles 0 to 25	9	0.0%	624	22%	28	11%	75
	Percentiles 25 to 50	15	0.6%	619	53%	74	13%	74
	Percentiles 50 to 75	10	6.3%	615	40%	56	10%	61
	Percentiles 75 to 100	3	0.0%	743	99%	94	0%	-
Leisure & Entertainment	Percentiles 0 to 25	3	0.0%	753	67%	90	33%	29
	Percentiles 25 to 50	4	0.0%	737	50%	53	0%	-
	Percentiles 50 to 75	3	24.2%	566	33%	41	33%	468
Real Estate	Percentiles 0 to 25	39	1.9%	762	46%	62	21%	59
	Percentiles 25 to 50	17	0.0%	915	47%	56	6%	5
	Percentiles 50 to 75	13	7.2%	641	31%	36	15%	130
	Percentiles 75 to 100	7	0.0%	1,147	71%	178	0%	-
	Overall	**123**	**3.6%**	**738.40**	**50.9%**	**70**	**13.0%**	**82**

[1] No data is available for any abnormally expensive project in any sector

[2] No data is available for the 75th to 100th percentile in the Leisure & Entertainment sector

The table again breaks down the data into industry sectors and further by project size. The number of completed projects during 2008 is shown, in addition to the average project duration in calendar days. The chance of a project being early or late is calculated and the average number of calendar days a project is early or late is shown in each case.

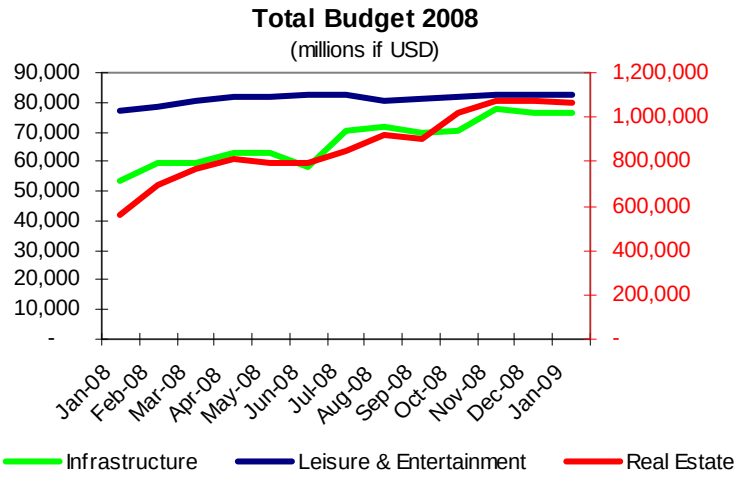
From the analysis above, one may conclude that the amount of money spent does not tend to change when projects are late, but the period over which it is spent, does. This has an effect on cash flow over time that needs to be considered.

Contingency calculations for project timing should provide for an approximate two and a half month delay.

The financial size of the project has an influence on the duration of the project, but it is not always true that more expensive projects take longer to complete.

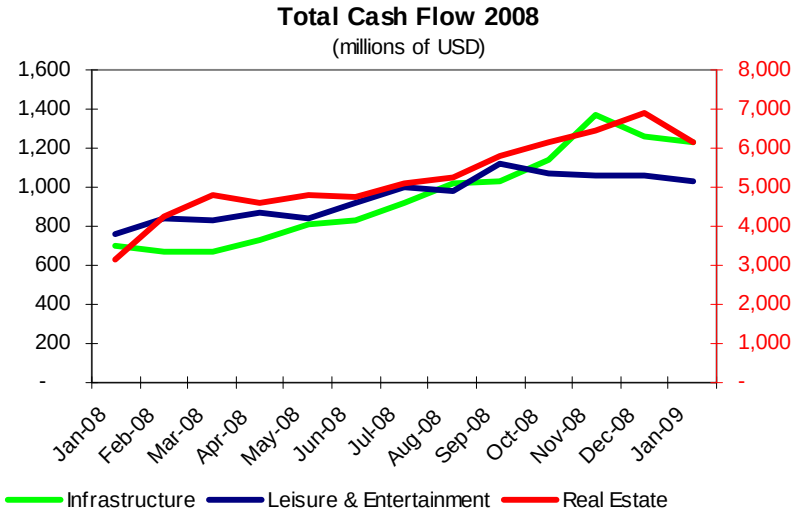
How is the industry changing?

As was positioned at the start of this report, understanding how the number is changing is as important as number itself when approaching a problem. This section explores the rate of change over time in project status, as well as the effect on cash flow it causes.



The figure on the left shows the cumulative effect of operating projects in the industry, cancelled or completed projects leaving the industry, and new projects registered into the industry, all in terms of total budget over time. Please note that the Real Estate graph (in red) is to be interpreted using the scale on the right, while the Infrastructure and Leisure & Entertainment sectors relate to the axis on the left.

In terms of projected cash flow over time, the status of the industry is summarized on the right-hand graph against the same criteria as above. It again shows the cumulative spend of operating projects in their relative position in the spending profile. New projects spend is added, while the cash flow for completed, cancelled or "on hold" projects are all set at zero from that point forward.



During the first three quarters of 2008, the Real Estate and Infrastructure sectors experienced growth in budgets while the Leisure & Entertainment sector budget remained relatively constant.

All sectors experienced growth in cash flow over the greater part of 2008, but all sectors saw declines in cash flow spend during the last quarter of 2008.

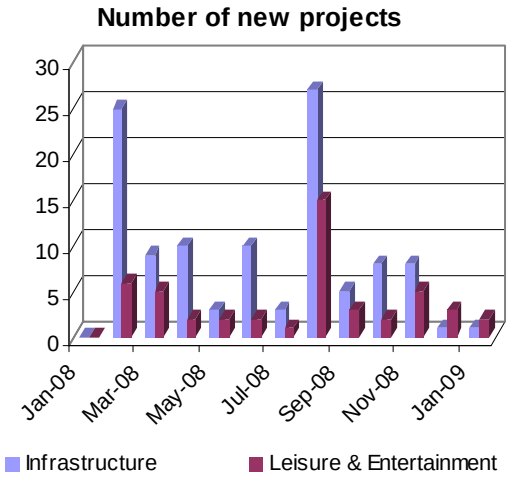
In spite of the decline in cash flow spend, all sectors remained relatively stable in terms of total budget during the fourth quarter of 2008. This is in line with an earlier finding that projects are rather placed on hold than cancelled - the budget remains, but cash flow declines.

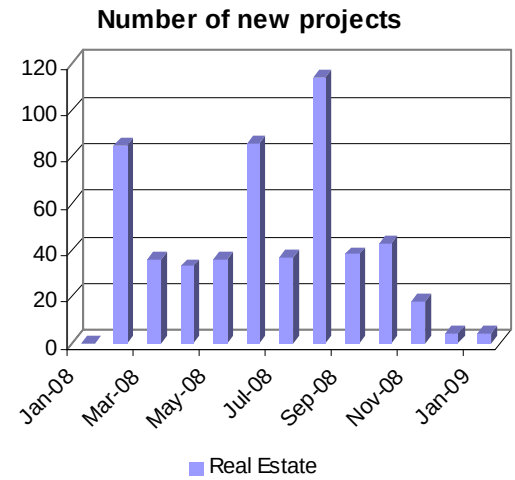
It is also important to note that even with the decline in cash flow of late, the industry as a whole in mid January 2009 is about in the same financial position as it was in October 2008.

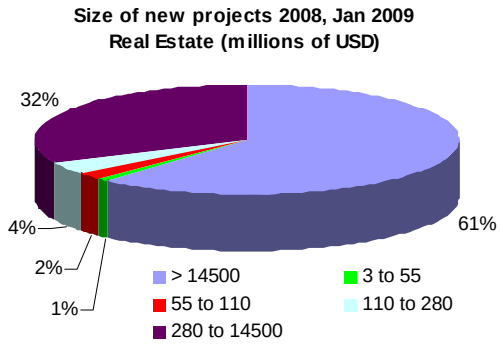
When considering cash in-flows into the industry, the number and size of new projects registered is of great interest.

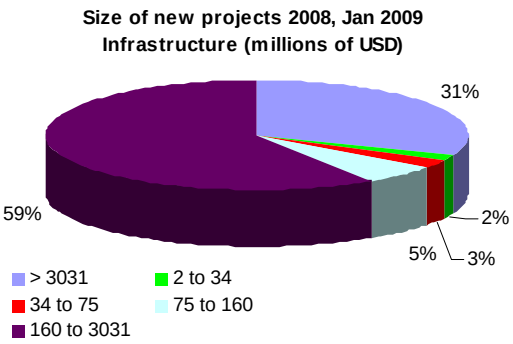
"…the industry in terms of cash flow and budget in mid January 2009 is in the same position as at October 2008…"

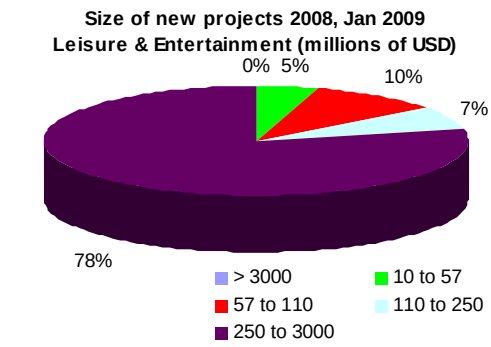
The charts and graphs below describe the rate of new projects entering the industry. (The Real Estate sector is shown in a separate graph only due to the greater number of projects in that sector; should all the sectors be displayed on one graph, the Infrastructure and Leisure & Entertainment sector data could not be interpreted with the same ease.) From a cash flow and industry size point of view, the size of new projects is just as important as the type and number of projects added. The nature of new projects registered during 2008 and January 2009 is depicted below in the pie charts, based on total budget.











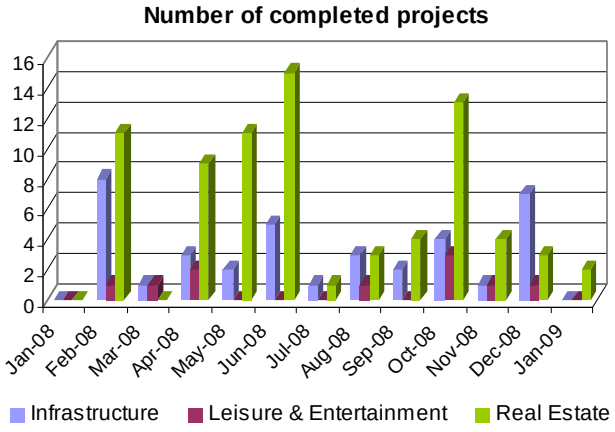
During the last quarter of 2008 all sectors saw a decline in the rate at which new projects were added.

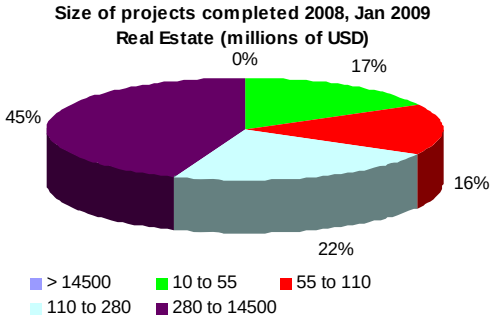
Within the Real Estate sector, new projects tend to fall in the USD 280m to USD 14,500m USD category in terms of total project budget.

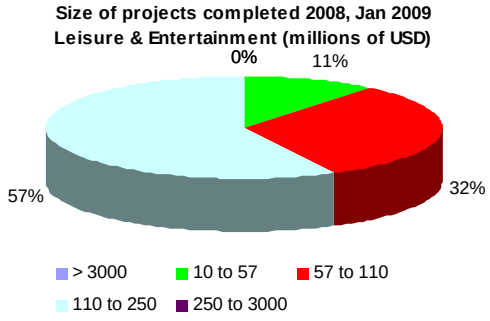
Within the Leisure & Entertainment sector, new projects tend to fall in the USD 57m to USD 110m USD category in terms of total project budget.

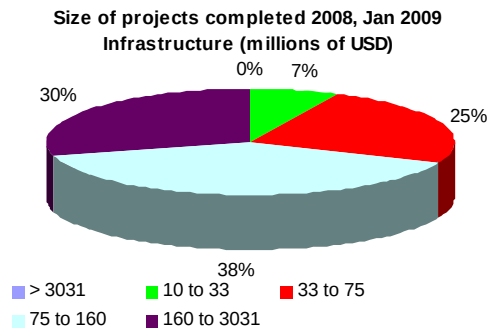
Within the Infrastructure sector, new projects tend to fall in the USD 160m to USD 3,031m USD category in terms of total project budget.

As opposed to new projects entering the market, the effect of completed projects is also of interest when considering cash flow in the industry. The graph on the right shows the rate at which projects complete, while the pie charts below depict the sizes of completed projects during 2008 and January 2009 respectively.









The rate at which projects complete slowed during the close of 2008 in the Real Estate sector, while remaining relatively unchanged in the other sectors.

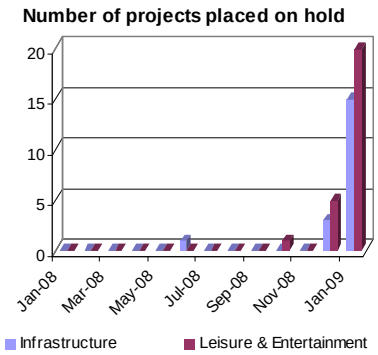
In the Infrastructure sector, new projects are typically bigger in size than those that complete.

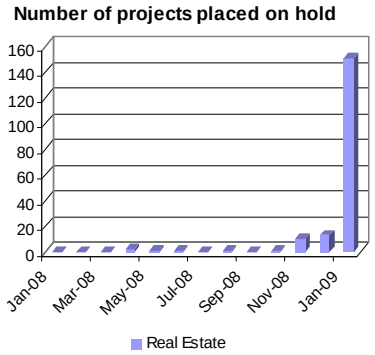
In the Leisure & Entertainment sector, new projects are typically smaller in size than those that complete.

Real Estate projects that complete and start are approximately the same in size.

Projects that are placed on hold affect cash flow in the sense that no money is spent for the period projects are on hold. Money already spent – up to the time a project is placed on hold or cancelled - is assumed to not be recoverable.

The graphs below depict the UAE construction industry by sector, with Real Estate shown separate from the other sectors. The size of projects put on hold during 2008 and January 2009 in millions of USD is summarised in the table. Projects that were already on hold at the end of 2007 are ignored since the rate of change during 2008 is being tested.





Sector	Size (millions of USD)	Number of projects placed on hold	(millions of USD)	
			Total Budget	Spent to Jan 09
Infrastructure	> 3,031	-	-	-
	2 to 34	2	41	-
19 projects	34 to 75	4	230	62
11,576 Budget (mUSD)	75 to 160	4	436	200
992 Spent (mUSD)	160 to 3,031	9	10,869	729
Leisure & Entertainment	> 3,000	-	-	-
	10 to 57	6	258	20
26 projects	57 to 110	5	402	10
9,604 Budget (mUSD)	110 to 250	7	1,308	205
422 Spent (mUSD)	250 to 3,000	8	7,636	187
Real Estate	> 14,500	6	196,711	6,406
	3 to 55	19	805	27
180 projects	55 to 110	44	3,635	101
377,962 Budget (mUSD)	110 to 280	42	7,870	520
16,657 Spent (mUSD)	280 to 14,500	69	168,941	9,601
	Total	**225**	**399,142**	**18,070**

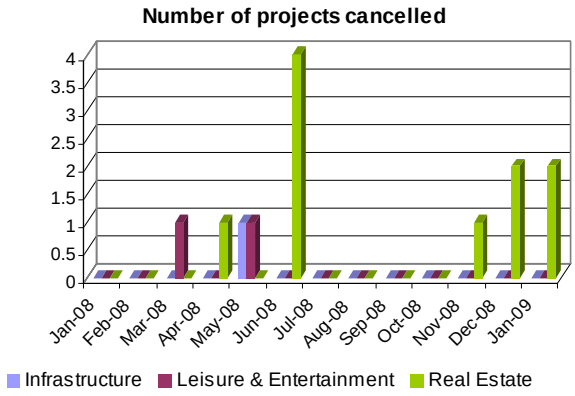
Since December 2008 a sharp increase in the rate at which projects are placed on hold is observed across all sectors in the industry.

It is found that the Real Estate sector is hardest hit, with projects in all size categories being placed on hold.

More expensive projects within the Infrastructure are being placed on hold more often than less expensive ones.

Within the Leisure & Entertainment sector, medium to large sized projects are typically placed on hold more often.

When a project is cancelled it no longer contributes to the budget or cash flow in the industry. The amount of money already spent cannot, however, be recovered. The figure below summarise the rate at which projects were cancelled during 2008 and January 2009.



"…On average 10.6% of the total budget is spent before a project is cancelled…"

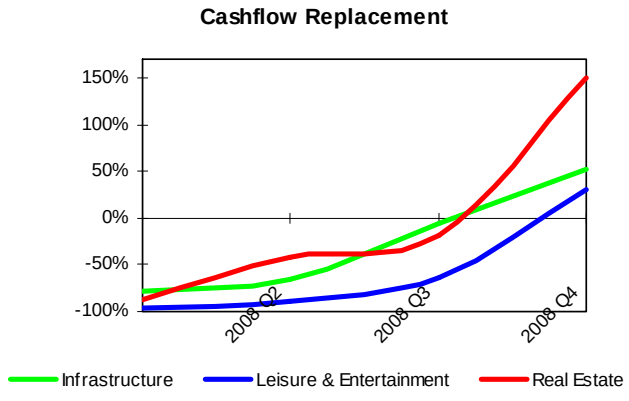
On average 10.6% of the total budget is typically spent before a project is cancelled.

Since the last quarter of 2008 the Real Estate sector has seen an increase in projects being cancelled.

Has the sustainability of the industry changed?

In order for the construction industry to remain in a state of prosperity, cash out-flows must continuously be replaced with cash in-flows. If this is the case, then a certain level of cash flow is *sustained* in the industry. The continued health of the industry is dependent on this sustainability.

In order to test this, the cumulative effect of cash flowing out and into the industry is plotted over time from January 2008 to January 2009. The effect of projects cancelled or completed is offset against new projects.



The effect of currently operating projects and those on hold should be ignored for this analysis because sustainability in this sense is concerned with the "replacement" of cash. Figures are calculated as the percentage of cash out-flows in a month that is replaced by cash in-flows. A value of 0% indicates complete replacement.

New projects have not succeeded in replacing lost cash flow due to project completion or cancellation for the first three quarters of 2008.

The graph is however skewed in the fourth quarter because the effect of projects being placed on hold *is not included* which results in fewer projects being completed and therefore less cash flow to replace.

What might happen?

Projecting the future state of the industry is no easy feat, especially when the global market is highly volatile. The projection shown in this section aims to predict what the industry may look like by applying the rates of change in the key market cash flow drivers to the industry position at mid January 2009. The key drivers to determine cash flow are once again categorised as cash in-flows and cash out-flows. The projection is derived per calendar quarter for 2009 in millions of USD.

Firstly, cash in-flows are derived from projects that are currently operating or restarted from an inactive status. Secondly, the effect of projects that complete, are cancelled or put on hold is to be considered as cash out-flows.

The estimates shown are thus based on the rate of change of the various drivers across 2008 and projected forward onto 2009, using numeric forecasting techniques.

"…estimates are based on the rate of change in cash flow drivers…"

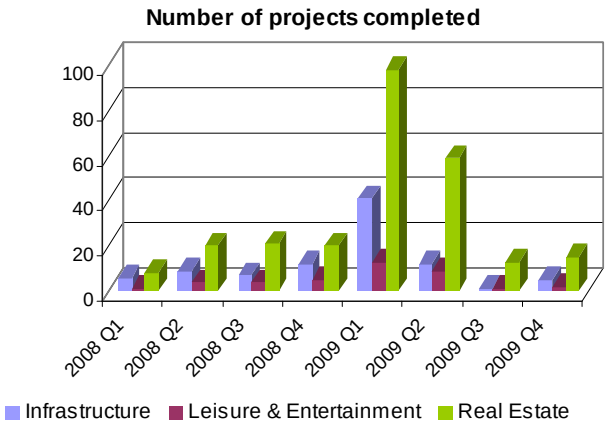
Projecting the key drivers

The effect of projects that complete is known with a great deal of accuracy - provided those projects are not placed on hold. It is assumed that active projects that are in the last third of the total project duration will continue and complete as planned, if not already placed on hold or cancelled.

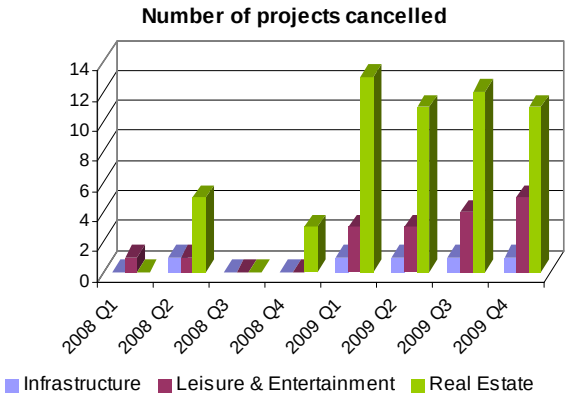
The effect in terms of number of projects that are projected to complete is shown in the graph.

The estimation is made using the scheduled completion dates of projects that are currently active.

It is projected that the first quarter of 2009 will see a large number of projects being completed.



The number of projects that are likely to be cancelled is also to be considered when projecting future cash flow in the industry. To estimate what this number could possibly be, the rate of change at which projects were cancelled in 2008 is projected against the number of projects still in operation after the projects that are scheduled for completion (as defined above) is removed from the cash flow status at the end of January 2009.

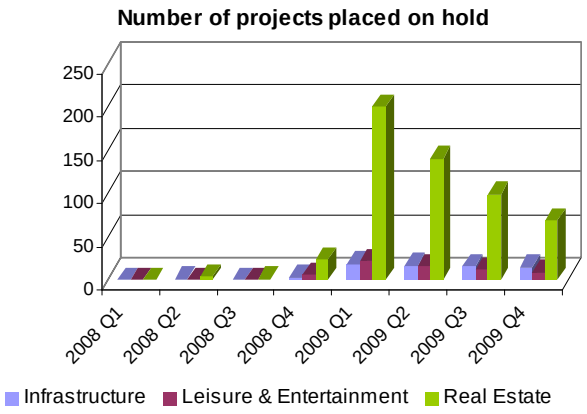


The graph on the left summarises the projected rate of projects being cancelled.

Given the sharp increase in projects being cancelled during January 2009, the rate of project cancellation is projected to increase slightly within the Leisure & Entertainment sector, while remaining relatively constant in the other sectors.

Within the Real Estate sector, it is projected that projects will be cancelled consistently throughout 2009, as will be the case, but to a lesser degree, within the Infrastructure sector.

In order to estimate the number of projects that are likely to be placed on hold during 2009, the rate of change of projects being placed on hold is projected onto both a) the number of operating projects remaining after projects scheduled for completion has been removed from the analysis, and b) the number of projects projected to be cancelled during 2009.



The graph above depicts the state of the projected industry in terms of the number of projects being placed on hold.

It is projected that the Real Estate sector will see many projects being placed on hold throughout 2009, albeit at decreasing rates in each quarter.

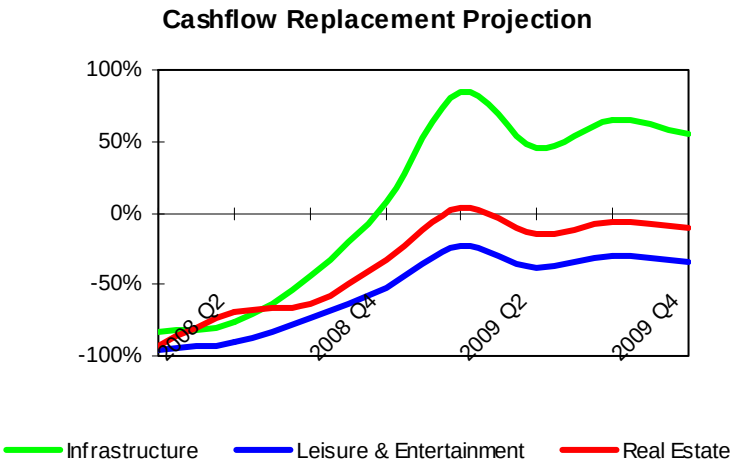
The Infrastructure and Leisure & Entertainment sectors may see the same effect throughout 2009 and similar to what was experienced in January 2009.

An estimate of cash in-flows is required; this implies that the number and size of new projects or projects restarting is to be estimated and added to the quarterly cash flow.

The manner in which this has been accommodated in the model was to estimate the rate of new projects being added to the industry, while also considering to probability of the project being placed on hold or being cancelled early in the project life cycle. The average size and duration of new projects during 2008 was used to translate the number of projects into budget and cash flow values.

These cash in-flows were then equated alongside the cash out-flows to project the future cash flow replacement ratio. In the graph on the right, all cash flows were considered:

- New projects
- Cancelled projects
- Completed projects
- Projects on hold



The graph shown earlier differs to the one shown here in the sense that projects on hold *are* considered. To achieve this gain however, new projects need to enter the industry.

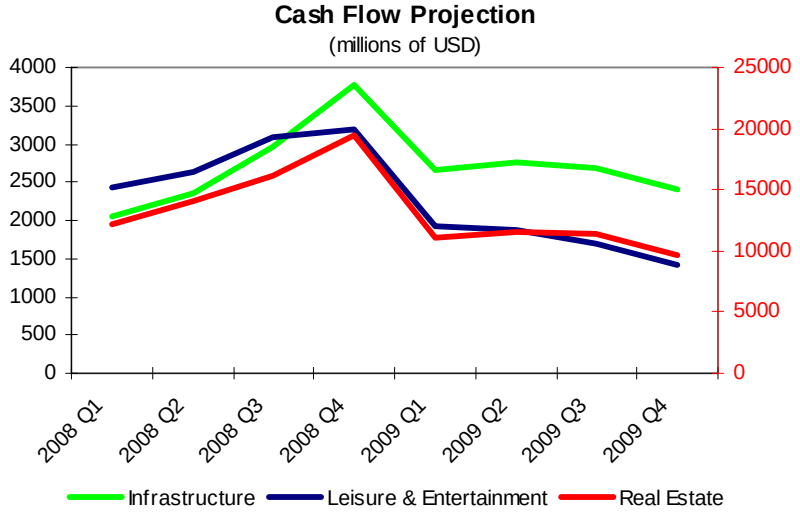
It is projected that the Real Estate and Leisure & Entertainment sectors will not be able to replace cash flowing out of the sector with cash flowing into the sector. This implies that these sectors are projected to decline in budget size and cash flow.

The Infrastructure sector is projected to be able to replace cash out-flows with appropriate cash-inflows provided that new projects enter the industry.

Estimating the future size of the industry

In order to estimate what the future size of the industry may be, the effect of the drivers as projected above is applied to the industry size in terms of cash flow at the end of January 2009. Effectively, the proportion of the various drivers in terms of the total number of projects is applied to the cash flow status, after applying the effect of projects scheduled to complete in 2009.

The cumulative effect of projects completing, being cancelled, placed on hold and the effect of new projects being added to the industry, is summarised in the figure. Please consider the Real Estate sector using the axis on the right.



The Real Estate and Infrastructure sectors are projected to follow a similar pattern, with the Leisure & Entertainment sector showing a minor but constant decline over 2009:

- The first quarter of 2009 is projected to see a dramatic decline in cash flow from the last quarter of 2008. Declines for the three sectors are estimated at

  -29% for the Infrastructure sector;

  -40% for the Leisure & Entertainment sector, and

  -43% for the Real Estate sector.

- The Real Estate and Infrastructure sectors are projected to stabilise during the second and third quarter of 2009, with a slight decline projected in the Leisure & Entertainment sector. During this time the effect of projects being cancelled or placed on hold is projected to be masked by the cash flow of operating projects.

- During the last quarter of 2009, the effect of projects completing, being cancelled or placed on hold will start to out-rank the cash flow status of operating projects. With little activity in terms of new projects being projected, that effect is projected to result in a decline of the industry in terms of cash flow. The change from the third to the fourth quarter of 2009 is estimated at

  -11% for the Infrastructure sector,

  -17% for the Leisure & Entertainment sector, and

  -14% within the Real Estate sector.

The dormant opportunity

Effectively, cash flow levels are projected to be similar to those in 2007. In times of global economic turmoil, estimating a cash flow situation at that level is proof of a resilient industry. The change from the end of 2008 to 2009 is summarised in the table below:

Sector	Change in Budget	Change in Cashflow
Infrastructure	-13%	-36%
Leisure & Entertainment	-5.43%	-56%
Real Estate	-7.03%	-50%

Although the industry in terms of cash flow is projected to decline significantly, in terms of budgetary size the industry remains relatively healthy. Given that the nature of the industry is that projects do not tend be cancelled easily, it creates a pool of money that will most probably be spent in future.

To conclude, *His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE* summarised the industry well:

"The UAE has a solid economic base that can withstand the effects of this crisis.

This crisis is temporary, however long it will be, and the oil producing countries must be prepared for a high rise in global demand when the world markets recover."

Considering economic vs statistical analysis

An estimate is exactly that: an estimate. The projections in this report are are based on statistical formulae predicting the rate of change of key drivers. These changes are driven by economic factors and the model thus assumes that the behaviour of the industry is reflected in the rate of change at which new projects are added, for example.

Should the economic climate change dramatically from what was mid January 2009, the industry may behave differently. In this case the projections will have to be recalculated to reflect the changed behaviour.

Exploring the impact on other industries

The effect that the construction industry in the UAE has on other industries like Retail and Tourism needs to be considered.

Other industries are impacted mainly on a ”demand” level. As an example, if the construction industry is not in a healthy state there will not be demand for people who perform the actual construction. Without those people there will be not be demand for clothing, food and so forth.

Proleads is currently investigation this effect extensively and will report on this in the future.

More about Proleads

www.projectsandleads.com

P.O. Box 126199

Dubai, United Arab Emirates

Reg. No. 16760

Tel: +971 4 390 2338

Based in Dubai, United Arab Emirates, Proleads global has established itself as a leading market research company. With a focus on the construction markets in major sectors, Proleads Global researchers work across twenty countries in the Middle East, North Africa and Asia.

proLeads

ProLeads offer online access to data relating to over 8,000 active projects valued at more than USD 6 Trillion. Subscribers can access detailed information on each project which includes the scope of work, ownership, budget, schedule, companies involved, contact details (telephone & e-mail) and the latest updates of the project.

Included is a corporate monitor that provides the user with a company profile for each project. Profiles consist of the basic contact details, senior management structure, projects analysis and more. In addition to this information, a number of analytical tools are available to assist clients.

proCost

ProCost is an online cost tracking model that uses a proprietary developed matrix to calculate and monitor costs in the construction industry. Subscribers get access to historical construction cost indices and a 5-year forecast, enabling them to estimate the impact of cost escalation.

proSCOPE

ProSCOPE is our consulting division which focuses, broadly, on Supply Chain Optimisation, Planning & Engineering on a tactical and strategic planning level.

proSpec

ProSpec is a free online product specification guide that provides architects and consultants details of thousands of products supplied to the construction industry. Subscribers can upload their products with specification guides, training videos, green info, etc. These give the user a very important 360 degree view of the entire industry.