

A silhouette of a construction crane against a sunset sky. The sun is low on the horizon, creating a bright orange glow. The crane is positioned on the right side of the frame, with its long jib extending towards the left. The background shows the dark silhouettes of buildings and trees.

GLOBAL CONSTRUCTION DISPUTES REPORT 2015

The Higher the Stakes, The Bigger the Risk

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Introduction

Disputes are a common feature of our industry. When a major construction project goes into dispute the impact is far reaching, manifesting itself in cost overruns, late delivery and, in some instances, compromising the quality and scope of the project itself.

Clearly, the risks involved are significant and are exacerbated in a market where projects are being aggregated into major programs, which themselves contain huge contractual and delivery risks. Our insights suggest that where a program experiences difficulties, arising disputes very often escalate into multi-billion dollar 'mega' disputes which prove extremely costly for all involved.

These complexities are big contributors to the sharp rise in dispute values that we have seen throughout 2014. With this in mind, understanding the causes, scale and extent of disputes is vital when we look towards positive avoidance mechanisms and to ascertain how to mitigate or resolve issues as they arise.

This report captures key data and insights into dispute trends both globally and regionally. We take a look at various data points on projects and disputes that the ARCADIS team has worked on throughout 2014 and the economic context under which these projects operate.

Our findings demonstrate a growth in the value and length of disputes. They also reinforce our previous year's findings, that the most common cause of disputes is a failure to properly administer the contract. This is both a revealing and concerning statistic. The solution appears to be predominantly within the gift of both employers and contractors. It

raises a myriad of questions as to how projects and programs are briefed, scoped, structured, roles, resourcing, training and the contracting environment itself.

That said, a substantive part of our industry successfully delivers projects and programs to predefined criteria extremely well. Therefore, in seeking the learning points for us in the industry we also need to look in more detail at what directly contributes to a successful project, and the key components of what causes a dispute. With this data we can then deploy mechanisms that allow us to positively avoid or mitigate the causes of such disputes.

This report is reliant upon the data from the work undertaken by ARCADIS. Therefore a risk exists that some of the marginal increases or decreases in value or duration could be sensitive to this. However given the scale, sector and geographical coverage and reference to last years, data, I am confident that in using this comparative study to draw out themes and trends, the insights and recommendations will be informative of the direction and scale of movement within the global and regional disputes market.

I do hope you enjoy this edition. We receive comment and feedback from various sources each year, which I welcome.



Mike Allen
Global Leader of
Contract Solutions
ARCADIS

“ The global economic recovery has seen the value of disputes rise and, therefore, the potential risk has also increased. ”



The Economic Landscape

Countries worldwide were affected by the 2008 crash and many construction markets saw setbacks, ranging from a significant drop in construction output in Europe, to the stalling of many major projects in the Middle East as well as a slowdown in some Asian markets.

In Europe and the US, many contracts secured after 2008, when business was scarce, are based on rock bottom prices and feature a significant additional transfer of commercial risk to the supply chain. Projects like these often create the conditions for disputes. In Asia and the Middle East, the complex nature of many large-scale infrastructure investment programs, as well as the potential lack of labor and management capacity, could also prove fertile ground for disputes.

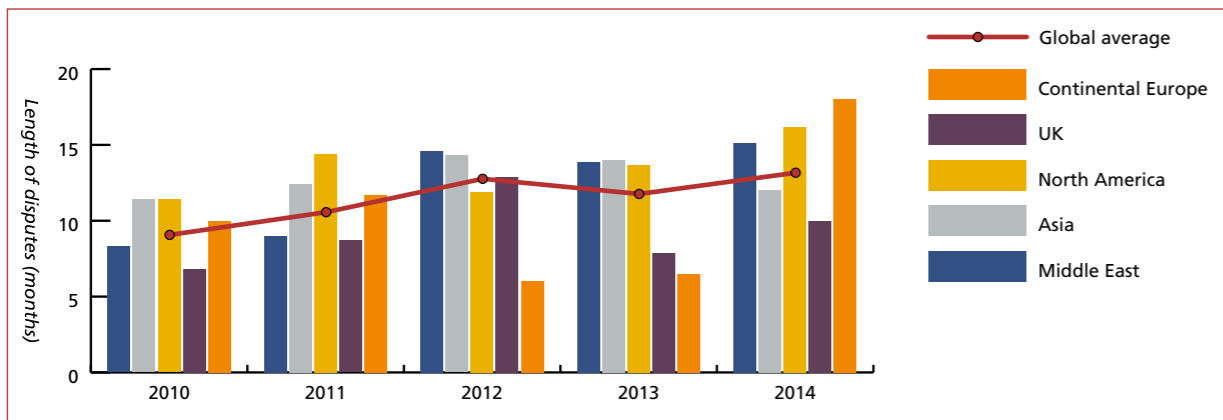
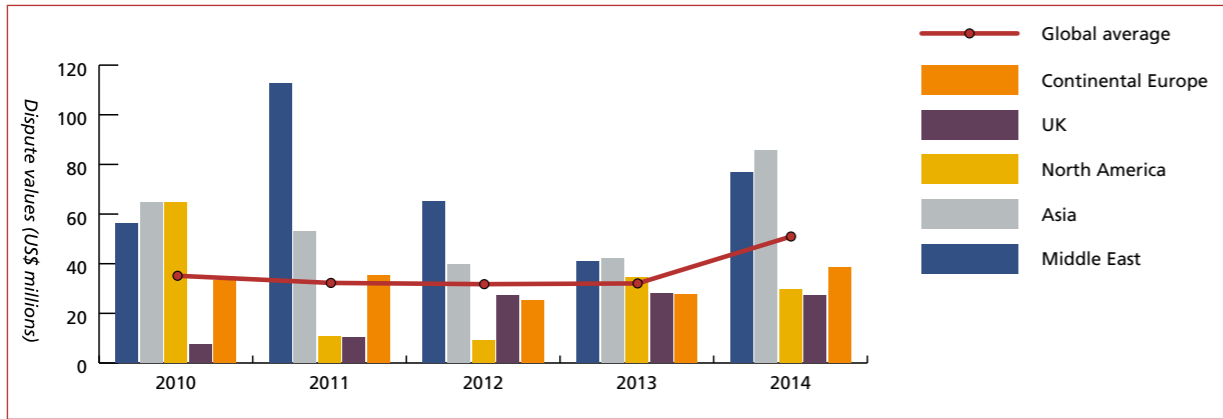


Overall findings

Figure 1

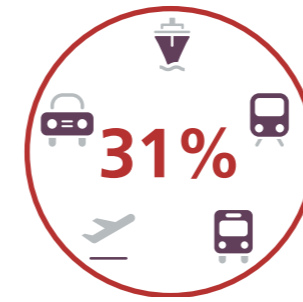
Where we refer to a 'dispute' we are referring to a situation where two parties typically differ in the assertion of a contractual right, which results in a decision being given under the contract, which in turn then becomes a formal dispute.

The value of a dispute is the additional entitlement to that included in the contract, for the additional work or event which is being claimed. The length of a dispute is the period between when it becomes formalised under the contract, and the time of settlement or the conclusion of a hearing.



2014 Rank	Cause	2013 Rank
1	Failure to administer the contract	1
2	Poorly drafted or incomplete and unsubstantiated claims	5
3	Errors and/ or omissions in the contract document	New
4	Failure to understand and/ or comply with its contractual obligations by the Employer/ Contractor/ Subcontractor	2
5	Failure to make interim awards on extensions of time and compensation	4

“ Poor contract administration is the most common cause of disputes. ”



31% of global disputes occurred in the transportation sector



Where a joint venture was in place almost a third of disputes were driven by a joint venture related difference



The highest dispute handled by the team in 2014 was worth US\$2.13 billion

Resolving disputes – let's talk

2014 Rank	Method of Alternative Dispute Resolution	2013 Rank
1	Party to party negotiation	1
2	Mediation	New
3	Arbitration	2

Figure 3

The single largest impact in avoiding a dispute was:

1. Proper contract administration;
2. Accurate contract documents; and
3. Fair and appropriate risk and balances in contract.

In reviewing the overall findings we find that when compared to previous years we gain the following headline insights into the global disputes landscape:

- They have increased by an overall average value;
- They have increased in duration;
- The most common cause is still a failure to administer the contract;
- 1 in 3 JVs still end up in dispute; and
- Part to party negotiation is still the most common form of resolving the disputes.

We have found that not only are these trends symptomatic of the work that we have undertaken, but by reference to a number of external data sources disputes are increasing in terms of frequency and value.

Various sources are identifying that the number of formal disputes is on the increase and in particular there is a marked increase in the number of arbitrations (the most common form of formal construction contract dispute resolution).

With programs of work being aggregated into various delivery models, it is happening at a time where a number of key features are evident in the global market, and may well be of a direct contributory relevance to the disputes themselves.

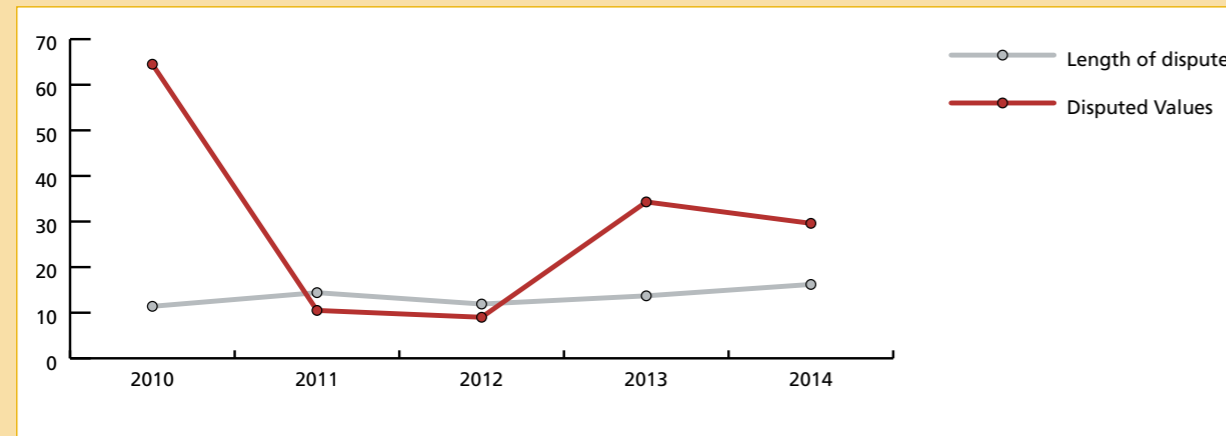
With the increased pace of globalisation, this means that we are now influenced to varying degrees to a much wider set of circumstances which include some or all of the following:

- An increase of Foreign Direct Investment into developing economies;
- The legacy effects of tenders priced in the immediate aftermath of the 2008/09 financial crisis and the ensuing economic recession;
- A rising global cost base and strain upon the supply chain;
- Scarcity of labour and professional staff;
- An increase in cross border and multi-jurisdiction activity;
- Exposure to more Force Majeure/Neutral event circumstances;
- High profile corruption scandals in South America and China, causing delayed or suspended decisions and also an increase for international corporate governance; and
- A significant reduction in the oil price that has caused a radical rethinking of strategy and delivery across the major programs.

Beneath the headline data of our research, many of these factors have also proved to be a contributory feature within the dispute environment, which are also considered to be key factors in considering our theme of “the higher the stakes, the bigger the risk”.

	Dispute values (US\$ millions)					Length of dispute (months)				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
North America	64.5	10.5	9	34.3	29.6	11.4	14.4	11.9	13.7	16.2

Dispute values in North America dipped between 2013 and 2014, although the amount of time taken to resolve these rose substantially.



2014 Rank	Cause	2013
1	Errors and/or omissions in the contract document	1
2	Differing site conditions	3
3	Employer, contractor or subcontractor failing to understand and/or comply with contractual obligations	New
4-	A failure to properly administer the contract	5
4-	Poorly drafted or incomplete and unsubstantiated claims	New

Top five causes of disputes in US construction projects 2014

For the second year running, the most common cause of disputes in North America during 2014 was errors and/or omissions in the contract documents. Differing site conditions came in second in the ranking, while a failure to understand or comply with contractual obligations on the part of an employer, contractor or subcontractor was the third most commonly cited reason for a dispute.

In North America, joint ventures tended to result in dispute in just less than one fifth of cases (19.8%), considerably lower than the global average of 31 percent and significantly down from 2013.

The three most common methods of Alternative Dispute Resolution used throughout 2014 in the United States were:

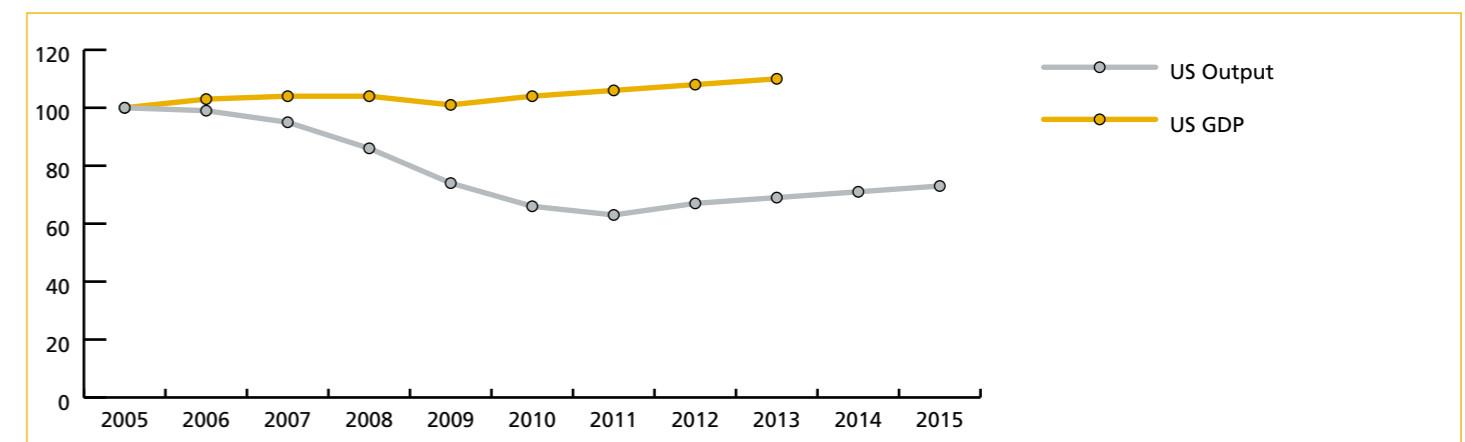
1. Party to party negotiation
2. Mediation
3. Arbitration

How has the US economy impacted disputes?

In the US, the recession hit earlier in 2006 and recovery was earlier and stronger than other Western Economies. The collapse of the US housing market had led the construction industry into recession in 2006, and output declined further as a result of the crash.

Whilst US GDP fell by 5.2%, construction output fell by almost a third by 2010 with prices dropping

by 15%. Despite this, the economy responded well to bank restructuring and the Federal stimulus package launched in 2010, resulting in the United States performing ahead of Europe on the road to recovery from 2011. The recovery in construction was driven by investment in energy, petrochemicals and manufacturing, as well as a recovery in the residential sector.



The North American Perspective

In the past few years the North American construction market has seen a significant rebound. All indications are that construction spending, especially in the public sector, will continue to increase. It is widely known that the US infrastructure system, much of it built in the 1950s, is in dire need of not just repairs but a significant overhaul. Alternate transportation system projects such as light rail and busways have moved to the forefront as the North American highway system reaches full capacity.

Today, the industry appears to adopt a program approach – group of interconnected projects – rather than project level. With big complicated, programs come even bigger risks. Significant portions of transportation budgets are often allocated to a

single project. As a result, these mega-programs also carry the majority of risk for an agency. With that risk comes increased political and public attention. Considering these factors, high visibility disputes are not an option for owners. Owners have turned to alternative project delivery, increased project controls and early intervention to mitigate disputes to help manage that risk.

As owners have reacted to the market, the contracting community has had to follow suit. Like the owner, the contractor is now involved in huge projects that are part of an even bigger program. This narrows the risk portfolio to a few major programs rather than managing a number of multiple but separate projects.

Roy Cooper

Head of Contract Solutions, North America

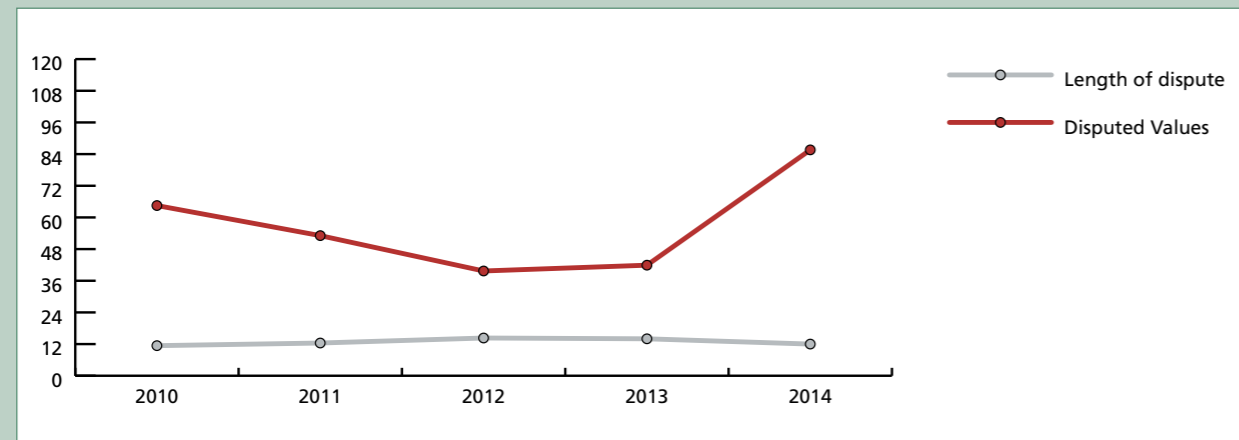


Asia

Hong Kong, China

	Dispute values (US\$ millions)					Length of dispute (months)				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Asia	64.5	53.1	39.7	41.9	85.6	11.4	12.4	14.3	14	12

Disputes in Asia were the largest in value, hitting an average of US\$85.6 in 2014. Significantly, this is almost double that of the previous year. Meanwhile, the amount of time taken to resolve Asian-based disputes fell by two months to twelve.



2014 Rank	Cause	2013
1	A failure to properly administer the contract	2
2	Failure to make interim awards on extensions of time and compensation	1
3	Poorly drafted or incomplete and unsubstantiated claims	New
4	A biased PM or Engineer	3
5	Poorly drafted or incomplete and unsubstantiated claims	5

Top five causes of disputes in Asia construction projects 2014

There were some changes in the reasons behind disputes in 2014. A failure to properly administer the contract was the most common cause, moving up from second in last year's report.

Where a joint venture was in place, 44% of disputes were joint venture related.

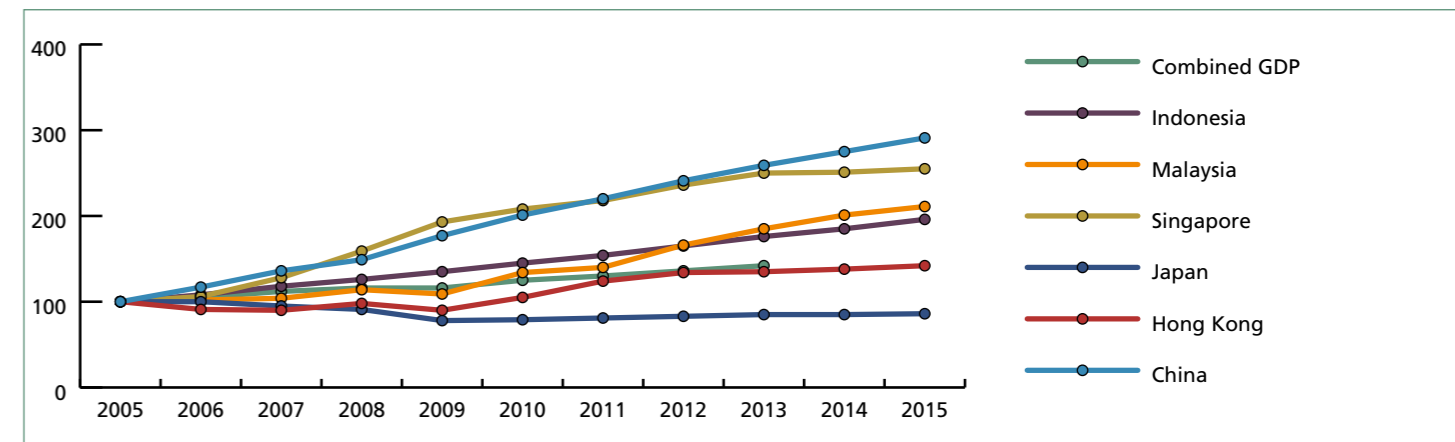
The three most common methods of Alternative Dispute Resolution that were used during 2014 in Asia were:

1. Party to party negotiation
2. Arbitration
3. Adjudication

How has the Asian economy impacted disputes?

Asia saw a smaller correction than the rest of the world, with some areas of recession and some of spectacular growth. The result of this saw no fall in construction output for the region as a whole. However, the slowdown in construction did begin to affect some markets after 2008. In fact, by 2009 China was growing at the slowest rate for a decade while Hong Kong saw construction output drop by almost ten percent.

That said, in 2010 infrastructure investment began to revive output levels across the region and Singapore, Hong Kong and China saw renewed growth in construction output. Many countries, like Malaysia and Indonesia, began ambitious programs of investment for economic diversification and social infrastructure. These complex projects, often with private financing, are contractually challenging and could lead to disputes.



The Asian Perspective

In 2014, the Asian construction market saw one of the largest recorded rises in average dispute values, doubling 2013 figures and far outstripping that of the past 5 years. This is, firstly, a reflection on the region's continuing growth, particularly in the likes of Singapore and Hong Kong and, secondly, due to the size and complexity of some of the continent's current programs.

These larger, more complex projects, often with private financing, are contractually challenging and can generate disputes with high values that simply do not allow the parties to negotiate or take a view. This is further compounded by the rise in joint venture arrangements which can lead to both internal disputes and inflexibility when it comes to negotiation.

The drive for greater transparency, particularly in connection with public spending, leaves less room for commercial settlement between the parties, driving more disputes to formal resolution. Therefore, the contracting parties can become more reliant on contractual mechanisms and the requirements of the terms of contract. However, a continuing failure to administer contracts by either party inevitably results in unresolved dispute values increasing at an alarming rate.

All told, as the stakes grow, so do the risks, both perceived and material. If parties continue to fail to manage the risk then the growth in the value of disputes will continue to accelerate.

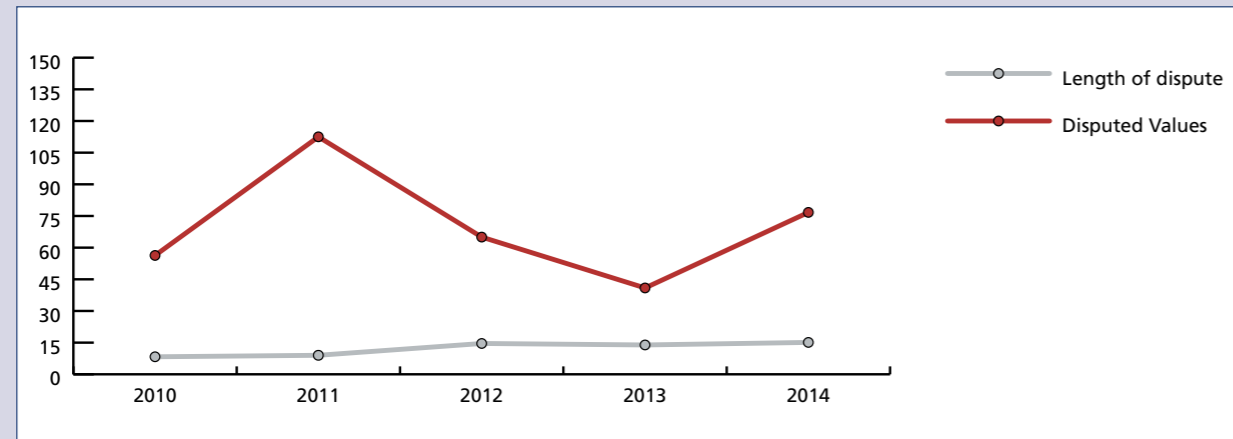
Gary Howells
Head of Contract Solutions, Asia

Middle East



	Dispute values (US\$ millions)					Length of dispute (months)				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Middle East	56.3	112.5	65	40.9	76.7	8.3	9	14.6	13.9	15.1

The Middle East region saw its dispute values increase to their highest value since 2011, growing from US\$40.9m in 2013. Overall, the amount of time taken to resolve disputes in the region is creeping up with the average creeping up by just over a month in 2014.



2014 Rank	Cause	2013
1	A failure to properly administer the contract	1
2	Poorly drafted or incomplete and unsubstantiated claims	New
3	A biased PM or Engineer	New
4-	Failure to make interim awards on extensions of time and compensation	New
4-	An unrealistic contract completion date being defined at tender stage	5

Top five causes of disputes in Asia construction projects 2014

A failure to properly administer the contract remained the most common cause of dispute in the region, followed by poorly drafted or incomplete and unsubstantiated claims which demonstrates the need to get the basics right.

One striking statistic from disputes in the Middle East was that almost half of joint ventures ended up in dispute during the year, for the second year running the highest of any region covered in the report.

The three most common methods of Alternative Dispute Resolution that were used during 2014 in ME were:

1. Arbitration
2. Party to party negotiation
3. Mediation

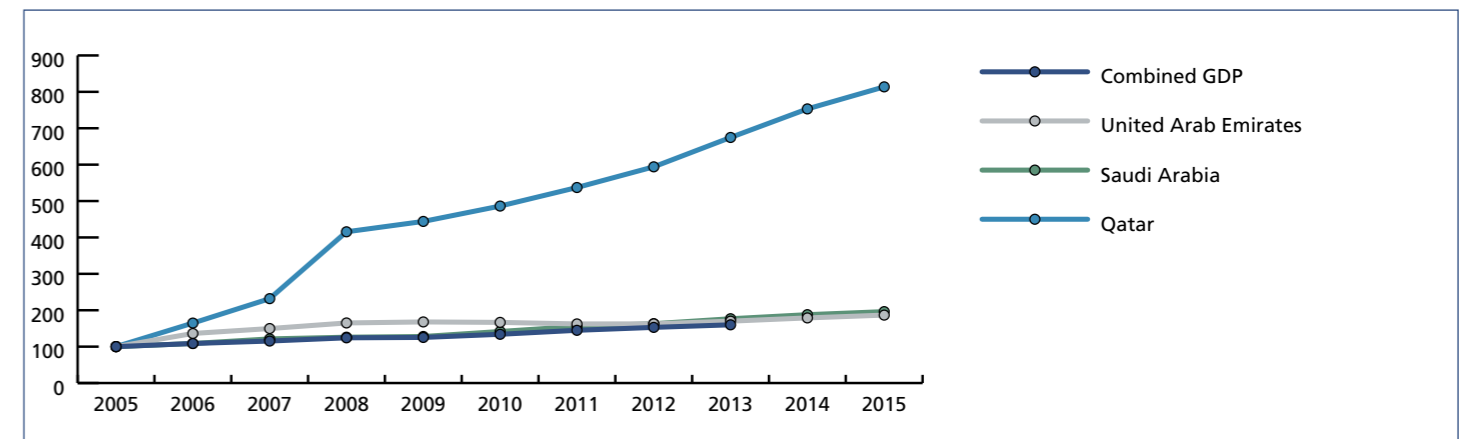
How has the Middle Eastern economy impacted disputes?

In the years prior to the global financial crisis, construction in Dubai boomed, raising concerns over the scarcity of resources as price inflation peaked. However, the recession had an impact across the region with a dramatic stall in projects in the UAE in particular. Across the region, other countries also saw minor slowdowns, but recovery had started to take hold by 2011.

The response of regional government to the Arab Spring protests drove large social infrastructure investment programs, and growing construction outside of the UAE; Saudi Arabia alone dedicated

\$517bn to transportation, energy and education projects. International events such as Qatar's 2022 World Cup and the 2020 Dubai World Expo are also driving growth in the region.

In spite of this, following the departure of some expatriate labor, the pool of talent needed to deliver these programs is limited. This, too, has exacerbated delivery constraints in some countries. The complex nature of the infrastructure investments, limits on human resources and the extensive use of joint ventures have raised the likelihood of disputes.



The Middle Eastern Perspective

With risk comes reward and it has been said before that he who dares wins. Most contractors are aware of these maxims and are not risk averse. Contracting is a risky business and that's why, after undertaking a thorough risk analysis, most contractors will undertake projects that have a significant amount of risk. Before the economic crisis, the construction projects in the Middle East were becoming bigger and better, each pushing the boundaries in terms of build complexity, time for completion and cost. Obviously, against this backdrop the contractors' risk profile increased dramatically as did the rewards.

What brought the market crashing down was the unforeseeable, some would say, economic crisis. This caused significant losses to all involved. The parties faced a dilemma whether to spend money in trying to recover these losses or to write them off and hang on to the money they had. Some did the

latter while others put their claims on ice. Thankfully, the Middle East construction market is back in full swing and contractors and employers are now seeing more liquidity in the market. With this, though, parties chose to park their losses now have the funds to pursue claims.

In 2014 we saw a number of high value claims being initiated for projects that were undertaken in 2008-09 due to money now being available to pursue those claims. This would appear to be the main reason why the value of the claims has increased in the region. Also, due to their complexity, these claims have taken longer to resolve. We predict this trend to continue throughout 2015 as more parties have the required liquidity to pursue their claims.

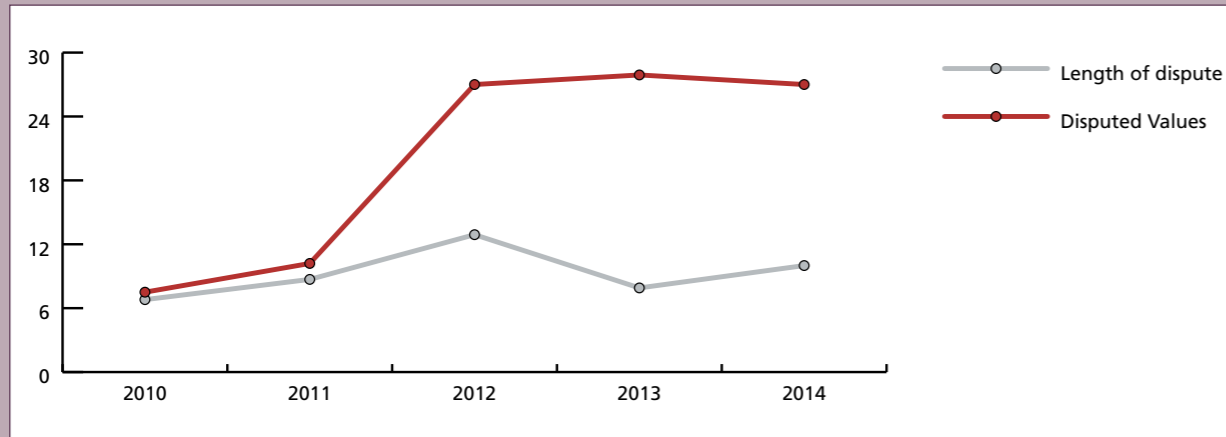
Allon Hill

Head of Capability, ARCADIS Middle East



	Dispute values (US\$ millions)					Length of dispute (months)				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
UK	7.5	10.2	27	27.9	27	6.8	8.7	12.9	7.9	10

Construction disputes in the UK dipped slightly in value to the same level as 2012. However, in spite of this, they took just over two months longer to resolve, averaging ten months.



2014 Rank	Cause	2013
1	A failure to properly administer the contract	2
2	Employer, contractor or subcontractor failing to understand and/ or comply with its contractual obligations	1
3	Poorly drafted or incomplete and unsubstantiated claims	4
4-	Conflicting party interests (subcontractor/ main contractor/ employer or JV partner)	New
5	Incomplete design information or employer requirements (for Design & Build)	3

Top five causes of disputes in UK construction projects 2014

The causes of disputes in the UK followed a similar pattern to previous years, although a failure to properly administer the contract rose to become the most common cause in 2014. This is also the most common cause globally and highlights the need for all parties to pay closer attention to the contract in question.

In the UK, where a joint venture was in place, almost a quarter of disputes were joint venture related.

The three most common methods of Alternative Dispute Resolution used during 2014 in the UK

1. Adjudication (contract or ad hoc)
2. Party to party negotiation
3. Mediation

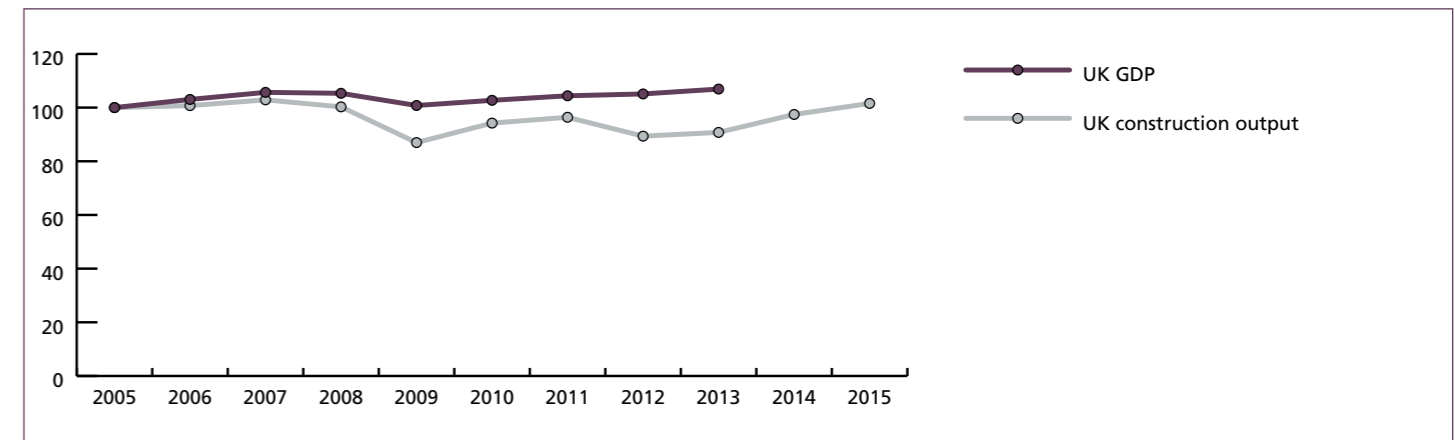
How has the UK economy impacted disputes?

When economic crisis hit, the UK construction market had been booming for some time. By 2008, uncertainty, particularly in the commercial market, had caused many schemes to be put on hold and tender prices started to drop. The contraction in house building accounted for much of the fall in construction, but commercial and infrastructure construction also suffered.

The return to growth of 2014 saw the construction market grow by over 7%, triggering significant resource constraints and cost inflation. However,

based on current forecasts, new build output will not return to pre-crash levels before 2016.

Contractors in the UK experienced similar conditions to those found in Mainland Europe. Fixed-price contracts won at the depths of recession were on the basis of very low margins, with much of the risk being passed down the contractual chain. The recovery of costs and increase in margins will have increased possibilities for dispute, particularly where clients are also operating on highly constrained budgets.



The UK Perspective

The economic triggered cost saving practices which, whilst succeeding in shorter periods of recession, have proved counterproductive at best and, somewhat ironically, have cost significantly more in the long term. Although the commercial and infrastructure sectors have recovered in line with the wider UK economy, the impact of cost saving practices can be seen in an increased prevalence of poor contract management and poor claim preparation.

With low-value short program works, these recession-induced effects are anticipated to reduce over the coming year. Conversely, larger projects tendered during the recovery period are still ongoing with a noticeable increase in pre-action advice and demand for claim evaluation services.

Both contractors and clients have been adversely affected by the protracted recovery but, with overly competitive tendering still in play, there is a risk that we could see a number of poorly prepared claims coming through from contracting organizations keen to improve margins in a rapidly improving real estate market. This behaviour is typical when there is a perception that the client is making a disproportionate margin, when the reality is often that they are simply benefiting from a well-timed investment.

Looking to the longer term, as emerging nations continue to ramp up their investment in built assets, we can expect to see an increase in demand driven by London's continued expansion as an international dispute resolution powerhouse.

Gary Kitt
Head of Contract Solutions, UK

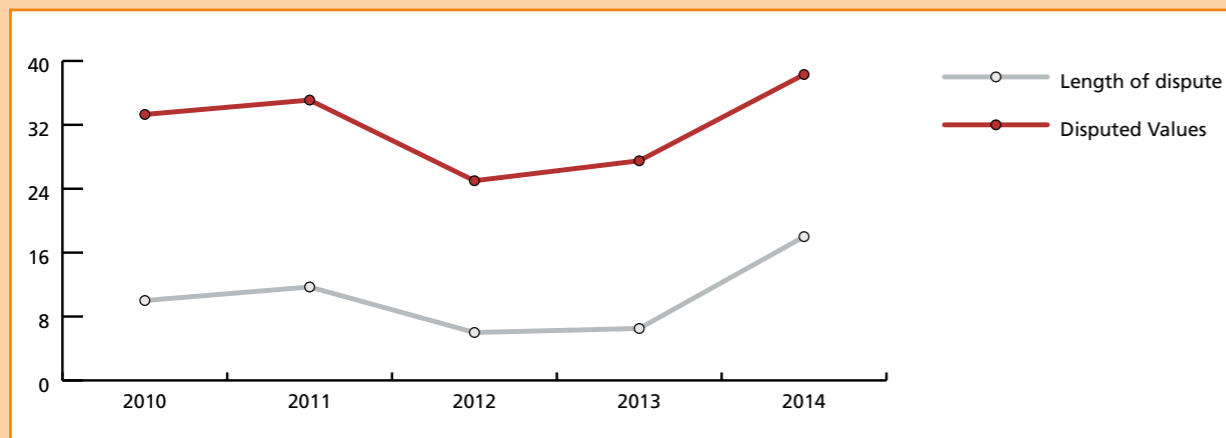
Continental Europe

Madrid, Spain

	Dispute values (US\$ millions)					Length of dispute (months)				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Continental Europe	33.3	35.1	25	27.5	38.3	10	11.7	6	6.5	18*

**This statistic has been extracted from a limited portfolio and so should only be considered as an indicative trend.*

The value of construction disputes in Continental Europe crept up again in 2014 following two years of low between 2010 and 2011. Dispute values were, on average, US\$38.3m in 2014, an increase of almost six million dollars.



2014 Rank	Cause	2013
1	Errors and/or omissions in the contract document	New
2	A failure to properly administer the contract	5
3	Failure to make interim awards on extensions of time and compensation	New
4-	Third party or force majeure events	2
5	Incomplete design information or employer requirements (for D&B/D&C)	New

Top five causes of disputes in UK construction projects 2014

Errors and omissions in the contract topped the ranking as the most common cause of disputes during the year, while a failure to properly administer the contract came in second place.

Where a joint venture was in place, 12.5% of disputes were joint venture related in Europe.

Three most common methods of Alternative Dispute Resolution used during 2014 in Europe:

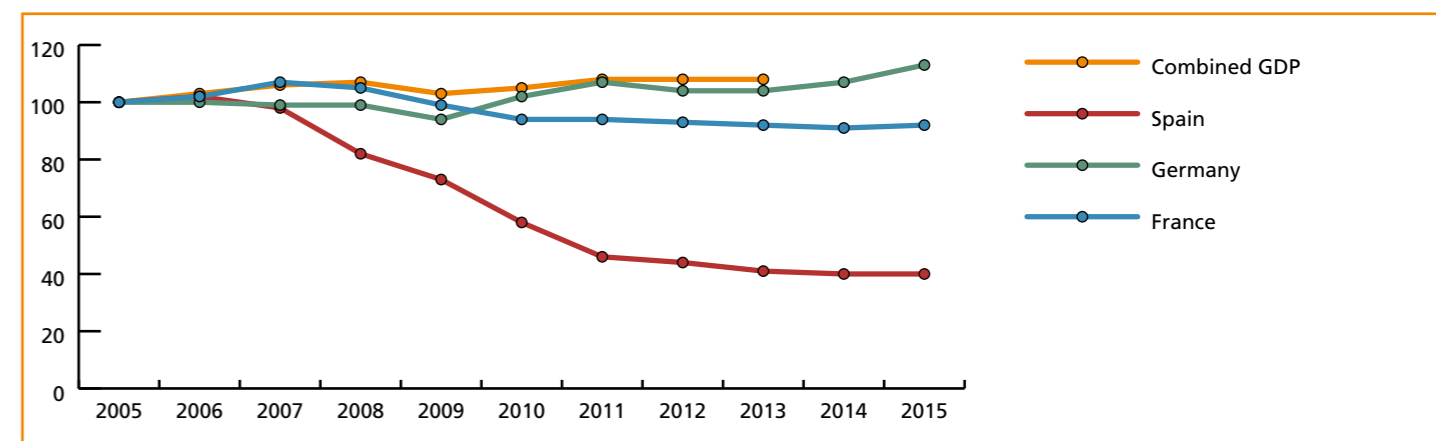
1. Party to party negotiation
2. Litigation
3. Expert determination

How has the European economy impacted disputes?

During the financial crisis, construction demand fell right across Western Europe with outputs falling by over a quarter. In Eastern Europe, however, construction was affected to a lesser degree by the crisis, with stagnation occurring rather than a drop in output.

Across Europe, the degree of loss of construction output varied considerably. Many countries

experienced five-year long downturns, leaving contractors running out of financing options well before the end of the recession. France, the Netherlands, Spain and Italy's economies were all still contracting in 2013, with recovery only underway in most countries by 2014. Slow recovery in demand for construction has been accompanied by modest improvements in the prospects of the construction market, but price levels still remain depressed.



The European Perspective

With green shoots of recovery evident in recent times across much of the continent, more complex and valuable construction projects have come to the fore, especially when it comes to large-scale infrastructure. This was most visible in the likes of Turkey, Romania, Russia, Czech Republic and Poland, while development in the markets of Greece, Ukraine, Italy and Spain continues to stutter.

Also of note is the issue of awareness. In markets where growth has been more pronounced, those operating in these areas are becoming increasingly dispute-conscious. In these areas, parties involved in the investment process have started to more vigorously seek for solutions which help them to maintain the profitability of their projects. As a consequence, they are more willing to submit claims and are not afraid to enter into disputes with their employer. It is for this reason that the average value of disputes rose so notably during 2014.

However, while some markets may be starting to see evidence of recovery, there has been no significant increase in accuracy of contract documents, project administration and documentation which affects European investments.

The complexity of projects also means they are taking longer to execute, resulting in it taking longer to resolve any conflicts and issues. The trend for using Alternative Dispute Resolution is strong but still a lot of disputes end up in long judicial proceedings. The process of collecting documents and data for dispute resolution - which comes from poor contract administration during the project's execution - and court procedures still consume a lot of time and prolong the settlement process.

Maciej Kajrukszo
Head of Contract Solutions, Continental Europe



Summary

The market landscape varies in each region around the world. However, to varying degrees, every region has been exposed to the hangover effect from the 2008 financial crisis and, more recently, the effects of the relative fall in the oil price.

Having looked at what is happening in the construction market in different parts of the world, two common reference points exist as to the causes of disputes. The first is the economic environment at the time of tendering and contract period; the second is the contracting circumstances and how the contract itself is actually administered.

During 2014 we saw the average value of a dispute increase to \$51m and the average length grow to 13.2 months. However, the most common cause of dispute has remained consistent as the 'failure to properly administer the contract'.

In isolation, these figures are very telling, but viewed in a wider context they demonstrate a growing trend. Over the last five years disputes have been increasing year on year in both value and duration. As the stakes get higher so, too, does the associated risk for all parties involved.

The main drivers behind this can be seen as the increased propensity towards complex aggregated programs; multi-geography delivery methods and contracting arrangements; faster paced schedules and external economic factors that influence contracting decisions and delivery. These factors have, in turn, led to the so-called 'mega dispute', with the largest dispute ARCADIS has been engaged with in 2014 exceeding \$2bn.

Finally, one cannot ignore the dynamic of client organisations driving faster-paced programs to deliver their assets, which can cause increased risks and possible shortcuts in delivery. There is an interesting link here with the fact that projects with disputes tend to be late and over budget, with issues of compromised quality and scope for clients.

So, what is the key to success when it comes to avoiding a dispute? Quite simply, projects and programs that are properly procured, with robust control and dispute avoidance mechanisms will help organisations achieve their delivery programs, and at the same time avoid the inherent dispute legacies that come hand-in-hand with fast paced delivery schedules.

Where these elements are in place, the chances of a dispute arising are minimized. This can prove essential to the success of any project as large programs have a greater propensity to 'go wrong', and to coin a common phrase, 'when it goes wrong, it goes horribly wrong'.

Thank you and I hope that you enjoy this year's edition.



Mike Allen
Global Leader of Contract Solutions
ARCADIS



Methodology

This research was conducted by the ARCADIS Construction Claims Consulting and EC Harris Contract Solutions experts and is based on construction disputes handled by the teams during 2014.

About ARCADIS:

ARCADIS is the leading global natural and built asset design & consultancy firm working in partnership with our clients to deliver exceptional and sustainable outcomes through the application of design, consultancy, engineering, project and management services. ARCADIS differentiates through its talented and passionate people and its unique combination of capabilities covering the whole asset life cycle, its deep market sector insights and its ability to integrate health & safety and sustainability into the design and delivery of solutions across the globe. We are 28,000 people that generate more than €3 billion in revenues. We support UN-Habitat with knowledge and expertise to improve the quality of life in rapidly growing cities around the world. Please visit: www.arcadis.com

Construction Claims and Contract Solutions Expertise

ARCADIS' Construction Claims Services and EC Harris' Contract Solutions teams help clients avoid, mitigate and resolve disputes. The team is based around the globe and encompasses one of the industry's largest pool of procurement, contract, risk management and also quantum, delay, project management, engineering defects and building surveying experts. The team provides procurement, contract and dispute avoidance and management strategies, management expertise as well as dispute resolution and expert witness services. This is delivered through a blend of technical expertise, commercialism, sector insight and the use of live project data, combined with a multi-disciplined and professional focus.

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