

Emerging Markets Economics: Panama

EMERGING MARKETS LATIN AMERICA

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Panama Canal project: Golden goose or white elephant?

Much rides on the approval of the Panama Canal's expansion in a national referendum in late 2006 or early 2007. The ongoing investment boom, high economic growth rates, and a rapid reduction in public sector debt over the long term all largely depend on it. The \$5.25bn (30% of 2006 GDP), eight-year project, if approved, has the potential to be the most important credit event in Panama over the next decade.

Last week, we visited Panama to examine the prospects for the project's approval in the national referendum and the risks associated with the project. Our main conclusions are as follows:

- We believe there is a 90% probability that the project will be approved. Political parties are in favor of the project and opposition from civil society groups has been subdued. The government is moving at a slow pace to allow time for public debate and political consensus. The current investment boom and buoyant economic activity are also supportive of the government and its proposal to expand the Panama Canal.
- The single most important risk to the project's approval is that the public may use the referendum as a protest vote against the government. Although this is not a risk factor now – given President Torrijos's high approval ratings – it could become one in the next several months.
- We believe the Panama Canal expansion project is more of a golden goose project rather than a white elephant: Although we do not have an expert opinion on the project, our review and due diligence suggest that the expansion project is well justified, the market demand, pricing and revenue forecasts are reasonable, and the cost estimates are realistic and well provisioned against unforeseen risks.
- Our sensitivity analysis suggests that the financing assumptions are sound and reasonably robust to lower-than-expected volume and revenue growth. Under an unlikely downside scenario, the ACP may have to debt-finance another \$1bn-\$1.5bn of project costs, on top of the \$2.3bn already envisaged during 2009-2011.

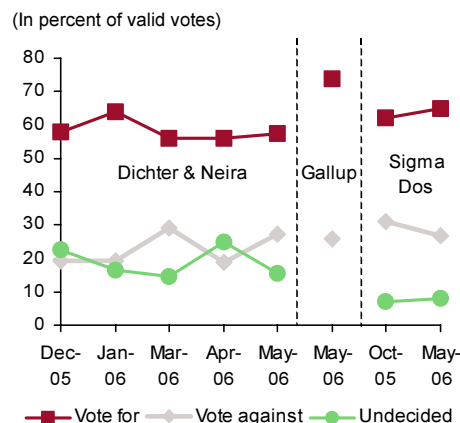
The Panama Canal expansion will likely be approved

We believe there is a 90% probability that the expansion of the Panama Canal will be approved in a national referendum in late 2006 or early 2007. This assessment is based on the project's immense importance and potential positive impact on Panama, recent polls, the lack of formal political opposition to the expansion, the absence of compelling technical and financial arguments (as far as we can detect) against the project, and the Panama Canal Authority's (ACP) planned information campaign in favor of the project.

Opinion polls show that around 60% of potential voters support the canal expansion.

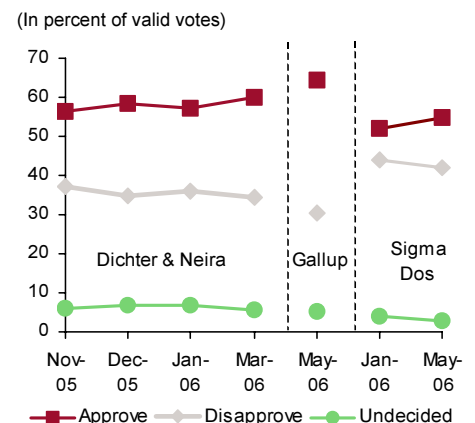
The project's approval hinges on a majority of voters voting in favour of it. Support for the project has been broadly stable since late 2005 across pollsters (Exhibit 1). By contrast, those opposed to the expansion have fluctuated around 20%-30% and currently stand close to 30% according to most polls in May. Polls on the expansion project broadly mirror those on President Torrijos, whose approval ratings are in the same range – about 60% (Exhibit 2). Although polls indicate a strong likelihood of the expansion project's approval if the referendum were held today, the referendum is still several months away. Therefore, drawing more robust conclusions on the likelihood of a "yes" vote requires an analysis of the factors driving voter sentiment.

Exhibit 1: Public opinion on the canal expansion project



Source: Various pollsters and Credit Suisse

Exhibit 2: President Torrijos's approval ratings



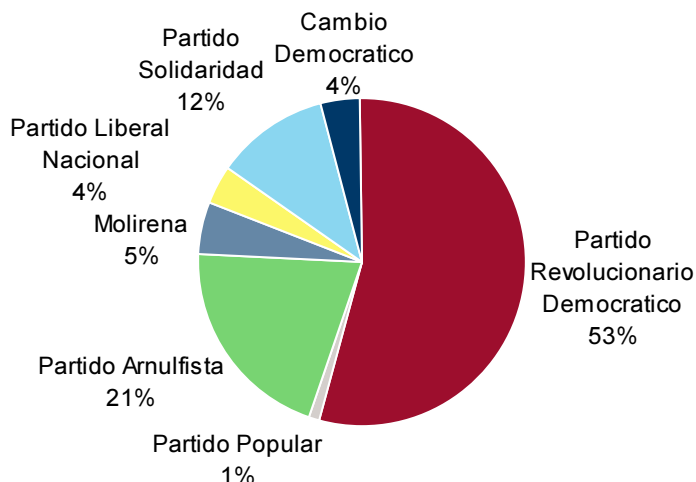
Source: Various pollsters and Credit Suisse

There is virtually no formal political opposition to the expansion of the Panama Canal.

President Torrijos's political party, the Democratic Revolutionary Party, holds 42 of 78 seats in the National Assembly and openly supports the project (Exhibit 3). Almost all opposition political parties also support the project, albeit not openly for political reasons. The broad-based support in congress stems in part from the government's clever management of the expansion plan's publicity: Before disclosing the plan to the public on 24 April, the ACP reportedly held closed-door sessions with representatives of each of the opposition parties to facilitate dialogue, build a consensus, and preempt public opposition to the project. Formal political support for the project, however, does not guarantee the referendum's success. Voters are somewhat disillusioned with existing political parties and direct political action by civil society groups and citizens can determine policy outcomes, as last year's six-month delay in social security reform illustrated. As one prominent local expert put it: "Politics are decided on the streets in Panama."

Exhibit 3: Political parties in the National Assembly

(In percent of total seats in the National Assembly)



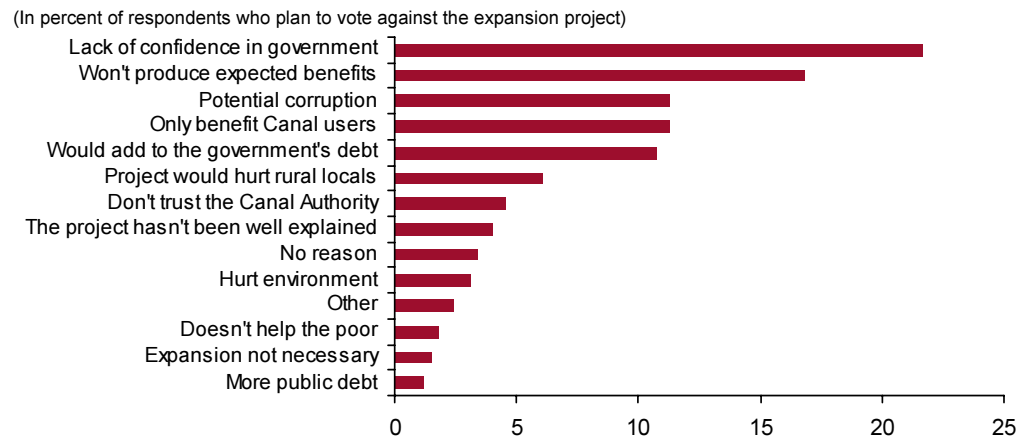
Source: National Assembly and Credit Suisse

Political opposition by civil society groups has been muted so far, in part because of the technical merits of the canal expansion project. Investigative research and reports by the local media appear to have concluded that the project is sound and positive for Panama. The media thus seems supportive of the project. Our discussions with journalists and pollsters close to the pulse of public opinion indicate that the public also broadly supports the project. Those once opposed to the project from fear of being dislocated from the canal watershed are no longer against it because the project does not involve submerging currently populated areas under water. Our meeting with one representative from a group of opposing intellectuals failed to detect a compelling argument against the project on technical or other grounds. As we discuss in more detail below, there are demand, cost, and execution risks, but these appear manageable, and in our view, well below the opportunity cost of not going through with the project.

The government is committed to securing the expansion project's approval and is moving cautiously towards this end. The swift passage in congress of fiscal and social security reforms in 2005 created backlashes against the government by civil society groups, delaying policy implementation. In the case of the Panama Canal expansion project – which has much wider and longer-term implications for the country – the government is moving at a slower and deliberate pace, allowing time for public debate and scrutiny. President Torrijos reshuffled his cabinet, relieving Hector Aleman (ex-Minister of Government) and Ricaute Vasquez (ex-Minister of Finance) of their cabinet duties and reassigning them to lead efforts to secure the canal expansion's approval in the referendum. Mr. Aleman is reportedly a skilled politician who is tasked with mobilizing grassroots political support while the highly respected ex-finance minister Mr. Vasquez, who is the ACP's former CFO and current Chairman, is orchestrating the information campaign. The ACP is organizing town meetings throughout the country with unions, chambers of commerce, university students and other groups about the expansion, and so far, the information campaign is reportedly being received well. The government apparently aims to submit the expansion plan to Congress by the end of June. After Congress potentially debates and approves a bill to hold a referendum, a minimum of three months must elapse before the government organizes a referendum, indicating that the referendum may be held in October or November 2006 at the earliest and could possibly slip into early 2007.

The single most important risk to the project’s approval is the referendum’s potential use as a protest vote against the government. This is evident, in part, from the fact that those opposed to the canal’s expansion most frequently cited “lack of confidence in the government” as their reason (Exhibit 4). Although the bundling of the government’s performance and the canal expansion project is not a risk factor now – given President Torrijos’s high approval ratings – it could become a source of vulnerability in the next several months before the referendum. Recently high growth rates (real GDP growth averaged 6% during 2004-05) notwithstanding, poverty remains high and progress in areas that touch people’s daily lives – confidence in the police force and the transportation sector – is relatively slow. There is also a history of past referendums becoming protest votes against the government in Panama. In two other referendums held in 1992 and 1998, in which the governments at the time proposed to abolish the armed forces (1992) and allow incumbent presidents to run for a second term (1998), voters rejected the proposals.

Exhibit 4: Why would you vote against the canal expansion project?



Source: Dichtner & Neira and Credit Suisse

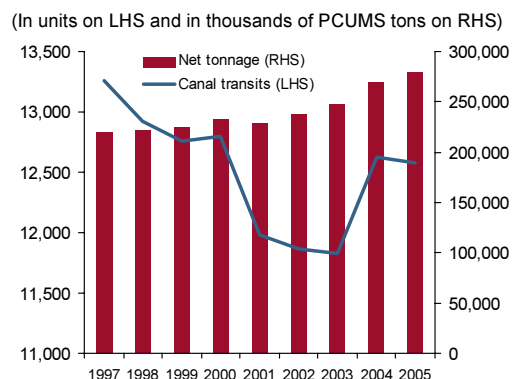
In the absence of a major political scandal or blunder, we expect voters to approve the project. The ongoing investment and construction boom in anticipation of the canal expansion is sustaining the economic growth momentum, and foreign investment into real estate is having a tangible wealth effect on the lives of many ordinary citizens. The government’s deliberate and methodical approach to building grassroots support and political consensus, and the project’s technical merits are all likely to lead to the approval of the canal expansion, in our view.

Why now and not later

The proposed \$5.25bn eight-year mega-project to expand the Panama Canal is motivated by the increasing importance of post-Panamax vessels in world trade and growing demand. The ACP estimates that the canal will reach full capacity between 2009-2012, which in turn will impair service quality and competitiveness. That the canal is approaching full capacity is based on several factors:¹

- The average vessel size transiting the canal has increased by 20% in the past five years. For example, in 2005, nearly 45% of the vessels transiting were the maximum width allowed, up from 35% in 2000. The increase in vessel size has supported growing cargo volumes, despite a drop in the number of transits (Exhibit 5).
- Bookings and the rejection rate for requested bookings have surged. In 2000, 40% of users requested a reservation, with only 1% of those denied. In 2005, 73% of users requested time slots, but only 55% received them. The remaining 18% of users had to transit on a first-come-first-serve basis, with longer waiting times.

Exhibit 5: Canal transits and tonnage



Source: INDESA and Credit Suisse

- Heavy traffic through the canal does not give the ACP sufficient time to perform necessary maintenance. Maintenance work in June 2004, for example, reportedly created a cue of 120 vessels, tripling the waiting time of nonbooked vessels, and required 15 days to normalize operations.
- Technical studies indicate that the canal has a maximum sustainable capacity of 330mn-340mn PCUMS tons², compared to the 279mn PCUMS tons that transited the canal in 2005. The canal thus operated at 85% capacity in 2005. The ACP's demand growth projections indicate that the canal will reach full capacity sometime during 2009-2011.

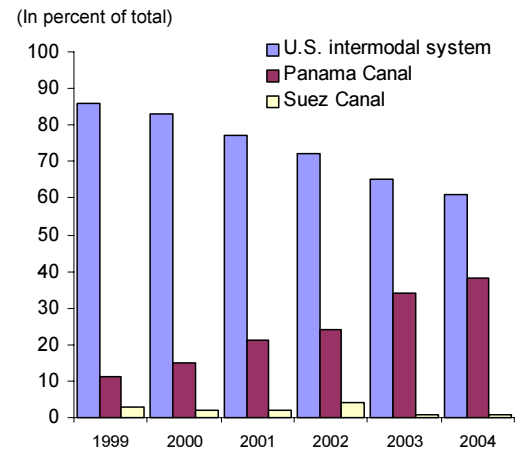
¹ Unless otherwise stated, the information summarized in this section is primarily based on Autoridad del Canal de Panama (ACP), "Proposal for the Expansion of the Panama Canal: Third Set of Locks Project" (April 24 2006) accessible at <http://www.pancanal.com/eng/plan/documentos/propuesta/acp-expansion-proposal.pdf>.

² PCUMS stands for Panama Canal Universal Measurement System, which is the measurement unit in tons of cargo transiting the Panama Canal. The PCUMS ton serves as a unit to establish tolls and measures volumetric cargo capacity (as opposed to being a weight-based measurement unit). A PCUMS ton equals around 100 cubic feet of cargo space.

The canal's market share has grown rapidly in recent years, but at close to full capacity, it runs the risk of becoming less competitive and reliable.

The canal's share of the container segment of the market on the Asia-U.S. East Coast route rose to 38% in 2004 from 11% in 1999 against its two main competitors, the U.S. intermodal system and the Suez Canal³ (Exhibit 6). The growth in market share has been achieved in part from \$1bn in investments and upgrades in the canal over the past decades, including the widening of the Gaillard Cut, the replacement of the locomotive fleet and tracks, and the deepening of the Gatun Lake. However, as the canal approaches full capacity, traffic delays could have costly repercussions on vessels' subsequent port calls, making the canal more expensive.

Exhibit 6: Canal share of container market from Asia to U.S. East Coast



Source: Panama Canal Authority and Credit Suisse

The Panama Canal's ability to maintain competitiveness and continue growing market share hinges on its ability to accommodate the passage of post-Panamax vessels. At present, post-Panamax vessels – which do not fit through the canal – account for 27% of the global capacity of container shipping and the ACP estimates that their share will increase to 37% by 2011 owing to the scale economies the vessels achieve. Post-Panamax vessels are likely to be the main source of future growth in world cargo volumes. Their transit through the expanded canal would allow the Panama route to accommodate higher cargo volumes with fewer transits, enabling the canal to reduce operating costs and maximize revenues. Without the expansion, the Panama Canal would be at a competitive disadvantage. The Suez Canal can handle post-Panamax vessels (but it requires much longer sailing times from the Far East) and the U.S. intermodal system's main advantages are its ports' ability to accommodate post-Panamax vessels and shorter sailing times (but it is less reliable and more expensive).

³ The U.S. intermodal system involves the transport of goods by sea to ports on the West Coast and then by rail to the East Coast. See ACP (2006), pp. 19-26, for a detailed discussion of the competitive position and potential of the Panama Canal, the U.S. intermodal system, and the Suez Canal.

Market demand estimates seem realistic and compelling

The ACP estimates that, with the expansion, the canal's PCUMS tonnage volume will increase on average 3% per year over the next 20 years. At that rate, annual PCUMS volume would almost double to just over 500mn PCUMS tons in 2025 from 279mn in 2005. The estimate is based on world trade growth, the expected growth of containerized cargo as a percentage of world trade, the relocation of manufacturing to Northeast Asia, as well as regional and intraregional demand growth. On this basis, the ACP believes the Panama Canal will expand its market share of containerized cargo on the Northeast Asia - U.S. East Coast route to 49% by 2025; without the canal's expansion, its market share could fall to 23%. The ACP estimates that the expanded canal would generate additional revenues of \$12.7bn (57% of estimated 2006 GDP) during the 11 years (2015-2025) following project completion and that net profits per PCUMS ton would increase four times that of 2005.

In general, large projects are subject to the risk of demand and revenue overestimation. In a study of "megaprojects" in *Megaprojects and Risk: An Anatomy of Ambition*,⁴ the authors find that designers and undertakers of large projects often substantially overestimate demand for the products or services of new projects. They give examples of actual demand amounting to half or less of original forecasts, although a more comprehensive survey of rail and road projects cited in the book suggests that while rail projects tend to underperform initial demand forecasts, road projects tend to overperform them. The authors attribute the overestimation of demand to several factors, among them, poor data for developing forecasts, unexpected changes to the operating environment, including exogenous shocks, and the pro-project bias of consultants.

We believe the lessons from other "megaprojects" do not necessarily apply to the Panama Canal and that the ACP's demand forecasts are reasonable. Unlike most of the projects surveyed in Flyvbjerg et al (2003), the Panama Canal expansion project is not a brand new project without precedent or a track record. Instead, the Panama Canal has a long history of operation since the early 1900s, operates in a mature and thoroughly studied industry, and has a long and reliable time series of data as a basis for forecasting future demand.

Past studies of the Panama Canal have underestimated the growth in traffic volumes. In the words of one prominent local expert, the demand market for the canal has been "studied to death" and studies have "consistently underestimated actual demand" over the years. In one study commissioned by the ACP in 2001, the authors projected the canal's volume and toll revenues would reach 266mn PCUMS tons and \$667mn, respectively, in 2005.⁵ By contrast, the cargo volume transiting the canal reached 278mn PCUMS tons and toll revenues reached \$885mn in 2005, exceeding forecasted amounts by 4.5% and 27%, respectively. The higher-than-projected increase in canal volume and revenues was attributable in part to the advent of containerized shipping in recent years.

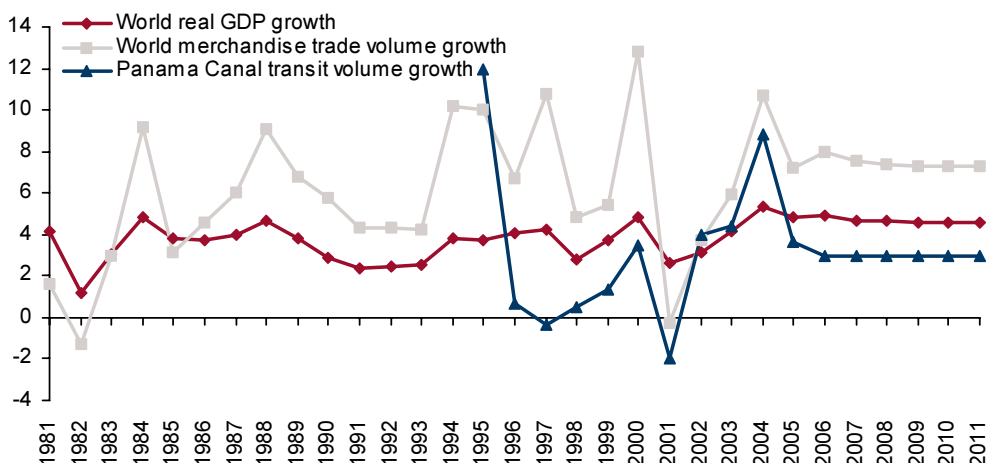
⁴ "Megaprojects and Risk: An Anatomy of Ambition" by Bent Flyvbjerg, Nils Bruzelius, and Werner Rothengatter (Cambridge University Press, 2003).

⁵ See ACP, "The Development of Long Term Traffic Demand Forecasts for the Panama Canal, 2001-2050" (February 2001). See <http://www.pancanal.com/esp/plan/estudios/0160.pdf>.

Recent trends and current forecasts of world output and trade growth are supportive of ACP's demand growth forecasts. During 1995-2005, the Panama Canal's transit volumes expanded by on average 3.3% per year, lagging behind the average annual growth rate of world output (4%) and merchandise trade (7%) over the same period (Exhibit 7). Nevertheless, since 1998, the canal's transit volume growth has closely mirrored the rate of expansion of world trade, with a coefficient of correlation of 0.8. Extrapolating from the recent past, and the IMF's forecasts of annual world output and merchandise trade growth of on average 4.7% and 7.5% through 2011, respectively, the ACP's 3% per year growth forecasts for the canal's transit volume appears achievable.

Exhibit 7: Global economic trends and Panama Canal transit volume

(In percent)



Source: IMF, Panama Canal Authority and Credit Suisse

1/ World merchandise trade growth is computed by taking the weighted average of the growth of export and import volumes, weighted by the dollar value of imports and exports. Data from 1981-2007 is sourced from the IMF's WEO database. Forecasts for 2008-2011 are IMF forecasts of world output and trade in goods and services published in its most recent *World Economic Outlook* (April 2006).

The ACP's revenue forecasts also assume that it would raise tolls on average 3.5% per year over the next two decades. On this basis, tolls would be doubled by 2025. In this context, a key question is whether or not market conditions would permit the ACP to continuously raise tolls and remain competitive at the same time.

The ongoing shift in the composition of the canal's traffic is supportive of the ACP raising revenues and maintaining competitiveness. Since 1995, the composition of cargo transiting the canal has shifted dramatically from dry bulk to containers. Containers' share of canal traffic and revenues more than doubled to 35% and 40% of the totals, respectively, over the last decade. Dry bulk tends to consist of low cost, high volume goods (such as grains), whereas goods transported in containers tend to include high cost, low volume manufacturing goods originating from North Asia. Because tolls are a much smaller share of high cost, low volume goods transported through containers, the container segment of the market is less sensitive to potential toll increases than the dry bulk segment. As a result, the higher – and still growing – share of containers in the canal's traffic should allow the ACP to incrementally raise tolls without impairing competitiveness.

The single most important risk to the ACP's transit volume growth and revenue forecasts is a deep and prolonged downturn in the world economy. According to the IMF WEO database, however, the world economy has never registered negative output growth since 1970 and trade in goods has fallen in only three years and sharply rebounded thereafter.

Cost risks appear reasonable and are well provisioned

The ACP estimates that the expansion of the Panama Canal, including the construction of a third set of locks, will cost \$5.25bn between 2007-2014 (or \$4.7bn in 2005 prices). The estimate includes design, administrative, construction, testing, environmental mitigation, and commissioning costs as well as provisions for contingencies for all elements of the expansion project as shown in Exhibit 8.⁶ According to the ACP, the cost estimate is sound and reliable because (i) it is based on a detailed conceptual design of lock and navigational channels, (ii) the design was thoroughly analyzed for the feasibility of its construction, and (iii) the estimate was checked for robustness using a state-of-the-art risk analysis model.

Exhibit 8: Canal expansion project components and cost estimates

Project components	Estimate
New locks	(In millions of US dollars)
Atlantic locks	1,110
Pacific locks	1,030
Contingency for new locks	590
Subtotal	2,730
Water savings basins	
Atlantic water saving basin	270
Pacific water saving basin	210
Contingency for water saving basins	140
Subtotal	620
Access channels for new locks	
Atlantic access channels (Dredging)	70
Pacific access channels (Dry excavation)	400
Pacific access channels (Dredging)	180
Contingency for access channels	170
Subtotal	820
Existing navigational channel improvements	
Deepening and widening of Atlantic entrance	30
Widening of the Gatun Lake channels	90
Deepening and widening of pacific entrance	120
Contingency for existing channel improvements	50
Subtotal	290
Water supply improvements	
Increase the maximum level of Gatun Lake	30
Deepening of the navigational channels	150
Contingency for water supply improvements	80
Subtotal	260
Inflation during construction period	530
TOTAL INVESTMENT	5,250
Of which: Project costs	3,690
Of which: Inflation	530
Of which: Contingencies	1,030
Contingencies-to-project cost (In percent)	27.9

Source: Panama Canal Authority and Credit Suisse

⁶ In general, large projects are also subject to the risk of cost underestimation. Flyvbjerg et al (2003) argue that major transport projects frequently cost 50%-100% more than originally estimated. The authors attribute cost overruns to a lack of realism in the initial cost estimates, the underestimation of potential delays and their costs, changes in project specification and design, and the setting of contingencies at inadequately low levels. They also note "many major projects contain a large element of technological innovation with high risk."

The cost estimate includes \$1bn for contingencies against risks and unforeseen events; this is equivalent to 28% of base costs. The cost estimate is composed of three components: known and quantified costs (“known knowns”), known but not quantified costs (“known unknowns”) and as yet unrecognized costs (“unknown unknowns”).⁷ Excluding \$530mn allocated for 2% annual inflation during the construction period, total project costs are \$4.7bn in 2005 prices. Of that, \$3.7bn is the base cost estimate, which covers “known and quantified costs” and “known but not quantified costs” (construction allowances). The remaining \$1bn is for “unknown unknowns,” i.e., possible but unforeseen risks, including accidents, design changes, price increases, and delays. The cost estimate is based on a probabilistic assessment derived from the distribution of probabilities of all aspects of the project, some of which are jointly (and others independently) distributed. On this basis, the project has an 80% probability of costing \$4.7bn or less in constant 2005 prices, including the cost of identified risk factors.

The canal expansion project involves relatively few technology risks, according to the ACP. The ACP has direct experience with many elements of the project, including dredging, dry excavation, and improving navigational channels and has knowledge of the project area’s geological characteristics. The highest technology risks stem from the installation of the third set of locks made of rolling gates, but these are mitigated by several factors: The locks project reportedly has moderate risks because it does not involve underground or underwater construction or tunnel drillings. Moreover, the locks are based on a well-proven technology and are already in use in Berendrecht and Zandvliet (Belgium), Ijmuiden (Netherlands), and Le Havre (France).

Project execution risks also appear manageable. The project’s schedule was apparently developed on the basis of a feasibility study and evaluated by a sophisticated risk analysis model, according to which the project has an 80% probability of being completed in eight years or less. According to the ACP, it will execute the project as the owner, but will contract out most of the work. In particular, the ACP envisages hiring one program manager, two major contractors, around 40 sub-contractors, and one contractor for quality control. The ACP also plans to hire an independent contractor to monitor the progress of the project and that will report directly to the ACP.

In sum, we see downside risks on project costs as tolerable and the amount allocated for contingencies, at 28% of base costs, as adequate. Although we do not have an expert opinion on the ACP’s cost estimate and the potential construction delays and technological risks that may increase it, we have not identified any material reason to second-guess the ACP on its cost estimates. Moreover, the project’s cost estimates were developed by independent consultants and independently reviewed.⁸ Therefore, we do not think it is analytically useful to arbitrarily increase project costs for illustrative purposes at this juncture. However, we do conduct a sensitivity analysis of the project financing, based on lower volume and revenue calculations shown below.

⁷ See ACP, “Development and implementation of a risk model and contingency estimation for the Panama Canal Expansion Program.” (March 2006).

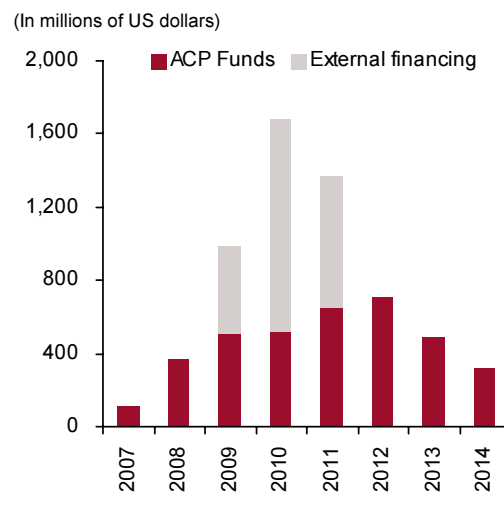
⁸ Parson Brinkerhoff International, the ACP’s principal consultant and project program manager, is a specialist in cost estimates whose contract with the ACP precludes it from participating in the project’s implementation to ensure its independence. The initial cost estimates were then independently reviewed by a technical committee, including experts from Arizona State University, University of California, and the University of Colorado.

Financing

The ACP envisages paying for \$3.7bn of the \$6bn in total project costs (including interest payments); the remaining \$2.3bn would be externally financed (Exhibit 9). External financing would be raised during 2009-2011, but possibly start as early as 2008 to prefinance anticipated outlays in 2009 and beyond. The ACP has not yet decided on the precise composition of financing but anticipates raising a mix of financing, including multilateral loans, commercial bank loans, and market-based bond debt.

The ACP's financing assumptions are based on 3% volume and 3.5% toll increases per year during and beyond construction. The financing assumptions also assume that the fiscal contributions to the government will remain broadly stable through 2012 at around 3% of GDP, before gradually increasing to 6%-7% of GDP in the decade after (Exhibit 10).

Exhibit 9: Sources of project financing

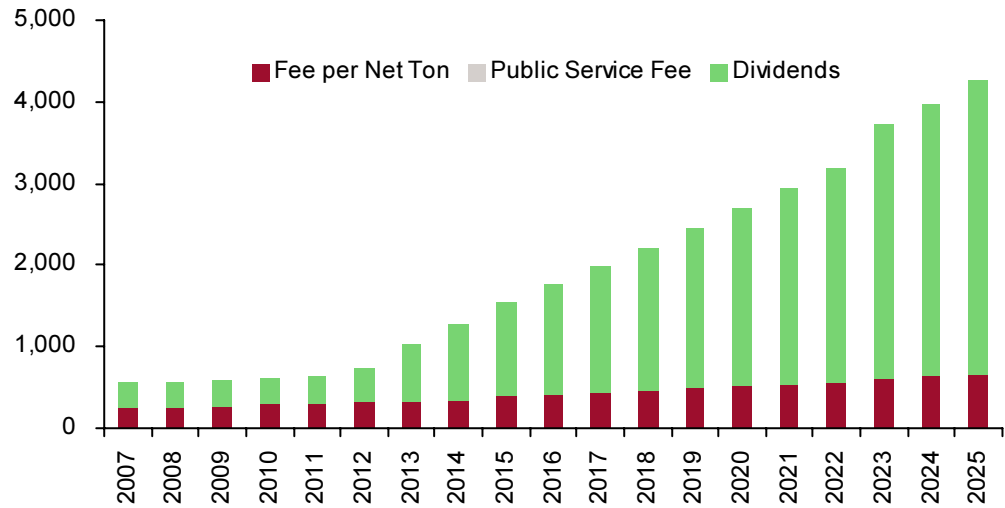


Source: Panama Canal Authority and Credit Suisse

Our sensitivity analysis suggests that the financing assumptions are sound and reasonably robust to lower-than-expected volume and revenue growth. Although the ACP's detailed revenue, volume, and toll projections are not publicly available for proprietary reasons, we attempt to replicate its financial projections as a check against the financing assumptions. Taking the fiscal year-end (ending September 30) financial results in 2005, we forecast revenues (using the annual 3% volume and 3.5% toll increase assumptions) and expenditures (using the average increase in nominal expenditures during 2003-2005) to project net income through 2014. We then subtract the fiscal dividends assumed by the ACP to derive residual funds available to finance the project. On this basis, we are able to roughly duplicate the ACP financing for the project, but for a cumulative discrepancy of \$327mn during 2007-2014 (Exhibit 11). However, the discrepancy would diminish if envisaged toll increases were front loaded as they probably are. If we assume one percentage point lower annual volume and toll growth of 2% and 2.5%, respectively, throughout the projection period, we find that the ACP would fall short by \$1.5bn, which, all other things being equal would shift the financing burden to external financing by that amount (Exhibit 12). To the extent that the ACP did not increase fiscal contributions in 2013-2014 as envisaged, the financing shortfall would be less at around \$1bn. For a project of this magnitude with long-term implications well beyond the next few years, we find the risk of an additional \$1.5bn (6.5% of the average estimated GDP during 2007-2014) in financing costs as tolerable. The ACP has no debt and the project could support higher leverage than currently planned, all other things being equal.

Exhibit 10: Fiscal revenues to the government

(In millions of US dollars)



Source: Panama Canal Authority and Credit Suisse

Exhibit 11: Revenue, profit, and financing forecasts, 2007-2014: Base Case Scenario

(In millions of US dollars, unless otherwise stated, fiscal year ending September 30)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total revenues	1,209	1,289	1,374	1,465	1,562	1,665	1,775	1,892	2,017	2,150
PCUMS tons (In millions)	278	287	295	304	313	323	332	342	353	363
Revenues per PCUMS ton (In dollars)	4.3	4.5	4.7	4.8	5.0	5.2	5.3	5.5	5.7	5.9
Expenditures	664	695	728	762	798	835	874	915	958	1003
Net profits	545	594	647	703	764	830	900	977	1058	1147
Fiscal contribution (ACP)	489	523	556	575	595	619	645	727	1,031	1,278
Of which: Dividends			312	318	325	331	340	406	702	944
Available for project financing (CS calculation)			334	385	439	498	561	571	356	202
ACP assumed financing for project			113	367	513	517	649	704	490	321
Discrepancy			222	18	-73	-19	-89	-133	-134	-119
Assumptions										
PCUMS tons growth (In percent)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Per PCUMS ton revenue growth (In percent)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Expenditure growth (In percent)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7

Source: Credit Suisse

Exhibit 12: Revenue, profit, and financing forecasts, 2007-2014: Downside Scenario

(In millions of US dollars, unless otherwise stated, fiscal year ending September 30)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total revenues	1,209	1264	1322	1382	1445	1510	1579	1651	1726	1805
PCUMS tons (In millions)	278	284	290	295	301	307	313	320	326	333
Revenues per PCUMS ton (In dollars)	4	4.5	4.6	4.7	4.8	4.9	5.0	5.2	5.3	5.4
Expenditures	664	695	728	762	798	835	874	915	958	1003
Net profits	545	569	594	620	647	675	705	736	768	801
Fiscal contribution (ACP)	489	523	556	575	595	619	645	727	1,031	1,278
Of which: Dividends			312	318	325	331	340	406	702	944
Available for project financing (CS calculation)			282	302	322	344	365	330	66	-143
ACP assumed financing for project			113	367	513	517	649	704	490	321
Discrepancy			169	-65	-190	-173	-284	-374	-425	-464
Assumptions										
PCUMS tons growth (In percent)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Per PCUMS ton revenue growth (In percent)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Expenditure growth (In percent)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7

Source: Credit Suisse

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