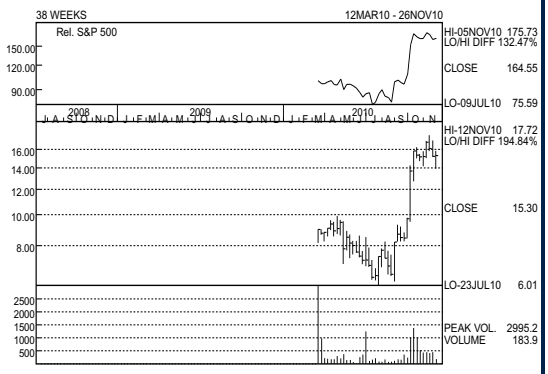


RBC Capital Markets, LLC

Jason Kantor, PhD (Analyst)
(415) 633-8565; jason.kantor@rbccm.com

Michael J. Yee (Analyst)
(415) 633-8522; michael.yee@rbccm.com

Adnan Butt (Associate)
(415) 633-8588; adnan.butt@rbccm.com

FY Dec	2009A	2010E	2011E	2012E
Revenue (MM)	20.7	38.6	27.4	57.8
Rpt EPS - Basic	(27.44)	(2.73)	(2.64)	(2.03)
P/Rpt EPS	NM	NM	NM	NM

Revenue (MM)	Q1	Q2	Q3	Q4
2009	3.7A	5.1A	5.9A	6.0A
2010	10.9A	15.6A	6.2A	5.9E
2011	3.7E	4.9E	4.9E	13.9E
Rpt EPS - Basic				
2009	(5.92)A	(6.41)A	(8.53)A	(6.57)A
2010	(2.27)A	(0.50)A	(0.60)A	(0.62)E
2011	(0.73)E	(0.80)E	(0.68)E	(0.47)E

All values in USD unless otherwise noted.

INITIATION | COMMENT

NOVEMBER 29, 2010

AVEO Pharmaceuticals, Inc. (NASDAQ: AVEO)

Expect Positive Data in Kidney Cancer in Mid-2011

Outperform
Speculative Risk

Price:	14.98	**Price Target:**	24.00
		Implied All-In Return:	60%
Shares O/S (MM):	35.5	**Market Cap (MM):**	532
Dividend:	0.00	**Yield:**	0.0%
Float (MM):	32.3		

Priced as of market close ET, November 29, 2010.

Initiating Coverage

Investment Opinion

We believe the risk/reward is favorable ahead of the pivotal Phase III readout for AVEO's proprietary lead drug tivozanib expected in mid-2011. Clinical risk is lowered by a well established mechanism of action, strong Phase II data, and a robust trial design. Product differentiation based on efficacy and safety would likely drive share gain in a crowded market, and greater specificity for the biological target (VEGF receptor) compared to other drugs from Bayer and Pfizer offer the opportunity to enter bigger markets currently dominated by Roche's Avastin. Retained product rights provide multiple partnering or M&A options, with significant upside from current levels. The head-to-head trial design versus an active comparator adds clinical risk, but is likely necessary for regulatory approval and market acceptance in the U.S. and Europe.

- **Phase III data by mid-2011**. TIVO-1 compares tivozanib to Nexavar in 500 kidney cancer patients. The primary endpoint is progression-free survival (PFS), and we expect tivozanib will easily beat Nexavar. It will be important that the PFS results for tivozanib also appear as good or better than Sutent, which is the market leader with the best PFS in Phase III.
- **Proprietary anti-HGF antibody AV-299 is second product candidate with key randomized Phase II data in late 2011.** Merck provided funding of $8.5M in May 2010 in the form of a Phase II milestone, but subsequently returned rights prior to seeing any data, giving AVEO 100% ownership of the asset. The mechanism of action has been recently validated in lung cancer from two close competitors, lowering the technical risk.
- **Sufficient cash into 2012.** AVEO ended September with $87M and raised an additional $60.8M gross in October at a 50% premium to its IPO price. We expect the company will end 2010 with approximately $121M, enough to comfortably get to key value inflection points while accelerating development of both AV-299 and tivozanib and initiating precommercial plans for tivozanib. Following positive Phase III data we forecast a partnership and equity financing in H2:11.
- **$24 price target.** Our probability adjusted sum-of-the parts analysis of $24/share includes tivozanib for renal cell ($20/share), two pipeline opportunities for tivozanib in breast cancer and AV-299 for non-small cell lung cancer ($9/share), and a net negative for its cash, debt, and forecast four-year burn (-$4/share). A company DCF and P/E multiple analysis leads to similar valuations.

Priced as of prior trading day's market close, EST (unless otherwise noted).

For Required Conflicts Disclosures, see Page 19.

Tivozanib – A Late-Stage Asset Poised for Multiple Successes

Tivozanib is AVEO's most advanced drug candidate and the primary near-term value driver. AVEO has completed enrollment in an ongoing Phase III trial that will read out in mid-2011. Positive results would likely lead to FDA approval and market acceptance in advanced renal cell carcinoma (RCC) or kidney cancer, and increase the probability of success in multiple other blockbuster markets including colon, breast, and lung cancer. AVEO controls the clinical and commercial development of tivozanib in all territories outside of Asia and owes a low- to mid-double digit royalty to Kirin.

AVEO has completed and reported positive data from a Phase II trial of tivozanib in advanced kidney cancer, completed enrollment in a 500-patient Phase III trial, and initiated several Phase Ib trials testing tivozanib in combination with other drugs that are commonly used in blockbuster VEGF-sensitive indications including Torisel (approved in RCC), FOLFOX (standard chemo used in colorectal cancer), Taxol (standard chemotherapy for breast cancer), and Xeloda (colorectal and breast cancer).

Tivozanib is differentiated from other small molecule VEGF inhibitors such as Nexavar and Sutent by its greater specificity for the VEGF receptor, which potentially improves its safety profile, makes it more combinable with chemotherapy, and potentially sets tivozanib up for success in markets now dominated by Avastin where Sutent, Nexavar and others have failed.

In the following sections, we provide:

1) A review of the key Phase II data
2) An analysis of the Phase III trial design
3) A comparison to other approved and development stage anti-VEGF therapies
4) An analysis of the market opportunities

Key data flow for tivozanib includes:

- Phase I combination data with Taxol in breast cancer at the upcoming SABC meeting in December
- Phase III data from TIVO-1 in mid-2011

Exhibit 1: AVEO Pipeline

Product	Indication	Trial(s)	Status	Partner
Tivozanib	Renal cell cancer	TIVO-1 (monotherapy)	Phase III	Proprietary
	Renal cell cancer	Combination with Torisel	Phase I	
	Colorectal Cancer	Combo with FOLFOX , Afinitor	Phase I	
	Breast Cancer	Combo with Taxol	Phase I	
	Breast Cancer	Combo with Xeloda	Phase I	
	Lung cancer	Monotherapy	Phase I	
AV-299	Non-small cell lung cancer	Combo with Iressa	Phase II	Proprietary
	Solid tumors, and multiple myeloma	Monotherapy	Phase I	
AV-203	Solid tumors	n/a	Preclinical	Biogen

Source: Company reports.

Exhibit 2: Clinical and Regulatory Newsflow

Timing	Expected News Flow	Program
Dec-10	Phase Ib combination data in mBC (SABC)	Tivozanib
Mid-2011	Phase III data for tivozanib in RCC	Tivozanib
Late-2011	Phase II data in lung cancer (combo with Iressa)	AV-299
Late-11/early-12	Initiate clinical trials	AV-203
Q1:12	File NDA	Tivozanib

Source: Company reports and RBC Capital Markets estimates.

Positive Phase II Provides Ample Data for Phase III Design

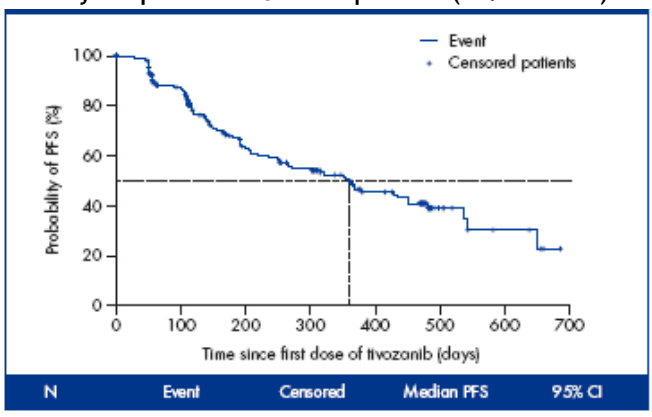
AVEO conducted a 272-patient Phase II trial in patients with advanced kidney cancer. The trial was single-arm and open label, but given the size and significant historical data for several approved agents, we believe the data is a reliable predictor of robust activity and a differentiated safety profile.

The primary endpoint was PFS, which was 11.8 months overall. Among patients with clear cell histology who had undergone prior nephrectomy (the target population in Phase III) the PFS was 14.8 months. In similar patient populations, approved drugs have demonstrated similar or much worse efficacy, including Nexavar (5.5 months), Sutent (10.9 months), and Votrient (9.2 months).

As a VEGF inhibitor, hypertension was the primary expected adverse event and it was observed in 50% of patients in the Phase II trial. Importantly, the emergence of hypertension, an on-target side effect, was associated with a statistically significant better outcomes measured by PFS. Non-VEGF related side effects seen with Sutent or Nexavar were not seen with tivozanib. These included mucositis, fatigue, neutropenia, and hand-foot syndrome. In addition to providing a better patient satisfaction and potentially reducing supportive care costs, the improved safety profile may permit tivozanib to be combined effectively at full dose with other agents, similar to how Avastin is administered in most of its blockbuster indications.

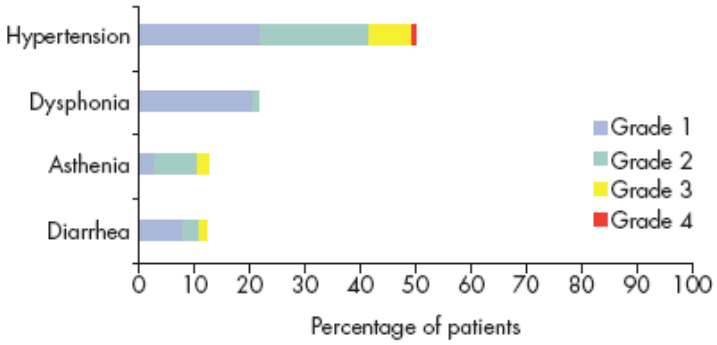
Exhibit 3: Positive Phase II Results for Tivozanib in RCC

Primary endpoint of PFS for all patients (11.8 months)

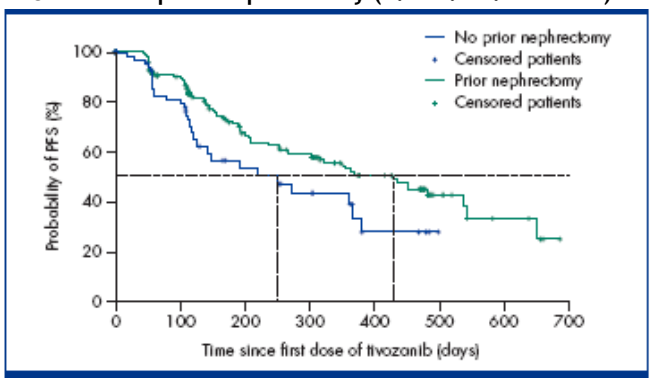


N	Event	Censored	Median PFS	95% CI
272	104 (38%)	168 (62%)	360 days	253.0, 450.0

Hypertension is most common adverse event

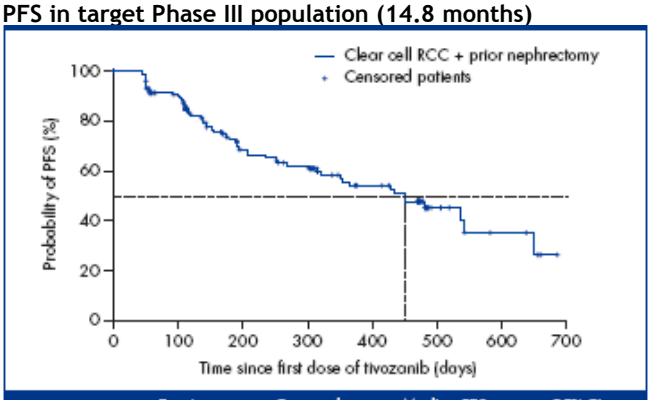


PFS based on prior nephrectomy (8.2 vs. 14.1 months)



	n	Event	Censored	Median PFS	95% CI
No prior nephrectomy	73	31 (42%)	42 (58%)	249 days	125.0, 379.0
Prior nephrectomy	199	73 (37%)	126 (63%)	428 days	302.0, 543.0

PFS in target Phase III population (14.8 months)



n	Event	Censored	Median PFS	95% CI
176	62 (35%)	114 (65%)	450 days	322.0, 650.0

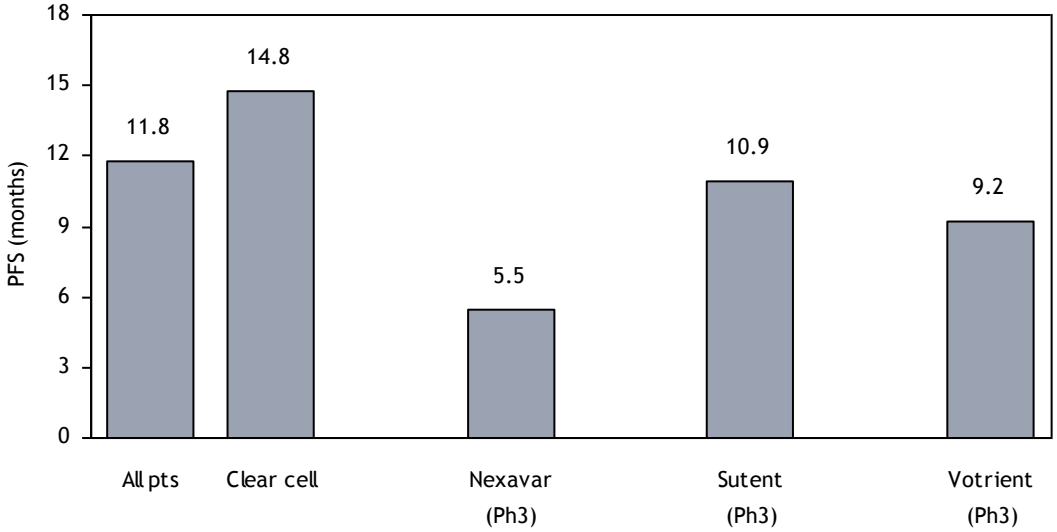
Source: ASCO 2010, ASCO GI 2010

Exhibit 4: Efficacy Based on Hypertension Response

		PFS (m)	p value	ORR	p value
All patients	272				
SBP >140 mmHg	113	14.8	0.01	30%	0.31
SBP <140 mmHg	159	8.9		25%	
DBP >90 mmHg	95	17.6	0.01	34%	0.06
DBP <90 mmHg	177	8.3		23%	
Prior neph.+ clear cell	176				
SBP >140 mmHg	71	NR	0.02	35%	0.43
SBP <140 mmHg	105	11.7		30%	
DBP >90 mmHg	63	21.4	0.06	38%	0.18
DBP <90 mmHg	113	12.0		28%	

Source: ASCO GI 2010

Exhibit 5: Efficacy Compares Well to Approved Agents in RCC



Source: Company reports and product labels

TIVO-1: A Pivotal Phase III Trial in RCC

The TIVO-1 trial compares tivozanib head-to-head against Nexavar in patients with advanced RCC who have not received prior VEGF-targeted therapy (e.g., Avastin, Nexavar, or Sutent). Patients in this trial may have received other treatments including chemotherapy, interferon, and mTor inhibitors. The primary endpoint of the trial is PFS and the study is designed to demonstrate superiority of tivozanib over Nexavar.

Exhibit 6: TIVO-1 Phase III Trial Design

	Tivozanib	Nexavar
Dose	same as Phase II	FDA approved
# of patients	250	250
Demographics	Advanced RCC	
	Confirmed clear-cell	
	Prior nephrectomy	
	No prior VEGF treatments	
	ECOG PS 0-1	
Primary endpoint	PFS	
Endpoint assessment	CT scan every 8 weeks	
	Independently confirmed	
Secondary endpoints	Overall survival	
	Objective response rate	
	Safety	
	Quality of life	
Powering assumptions		
PFS	9.7 months	6.7 months

Source: Company reports

Rapid Enrollment

The trial started in February 2010 and completed enrollment of the target 500 patients six months ahead of schedule in August 2010. The trial enrolled patients globally including 10% in the U.S., 30% in EU, and 60% from other territories.

Conservative Powering Assumptions

TIVO-1 is designed to demonstrate a three month benefit in PFS over Nexavar, assuming 9.7 months for tivozanib and 6.7 months for Nexavar. These assumptions were designed to be conservative. In its Phase III trial, Nexavar demonstrated a 5.5 month PFS and in its Phase II trial, tivozanib demonstrated an 11.8 month PFS overall and in the more comparable subset of clear-cell patients with prior nephrectomy, the PFS was 14.8 months.

Independent Review Provides Rigor

All patients enrolled in the trial must have measureable disease by CT scan and confirmed by an independent central review. This is particularly important given the global enrollment and the need to ensure that patients can be properly evaluated for progression and response. The independent review also applies to the determination of progression, which has three important benefits for AVEO:

1) It ensures that the progression data is suitable for FDA review,
2) It ensures that patients and physicians do not prematurely call progression for the sake of crossing over to the tivozanib arm; and
3) It potentially provides a very robust assessment of tivozanib in the patients with documented progression on Nexavar.

Cross-Over Is Good And Bad For The Final Trial Outcome

Patients randomized to receive Nexavar will have the option to switch to tivozanib upon documented progression. Patients that discontinue Nexavar for tolerability or any other reasons besides documented progression will not be eligible for tivozanib. The crossover design has two key implications for the study results: 1) it will be difficult to assess a survival advantage for tivozanib and 2) the trial essentially has a built in rigorous Phase II trial measuring the efficacy of tivozanib in patients with documented progression on Nexavar.

- **Survival Results Compromised.** The potential lack of a demonstrated survival advantage due to a crossover study can increase regulatory risk, as FDA has moved more toward survival as the key endpoint for approval in most tumor types. However, there are many drugs available for the treatment of RCC, and PFS is the best measure of a drug's direct impact. Superiority in PFS demonstrated in a large head-to-head trial along with potential safety advantages are likely sufficient for FDA approval, in our view, even in the absence of a demonstrated overall survival advantage, which could be difficult to assess due to a cross-over trial design that ensures patients who progress in the control arm have the opportunity to receive tivozanib treatment.
- **Second-line Efficacy.** The only patients that are eligible to cross over will be those with centrally confirmed progression while on Nexavar. The activity of tivozanib in this population will be very important because there are likely a large number of RCC patients in the existing prevalence pool that have failed Nexavar or other anti-VEGF therapies. Activity in patients that have recently progressed on Nexavar provides the most rigorous measure of activity in this setting.

Axitinib – A Close Competitor

The closest competitor in development is Pfizer's axitinib, which is also a selective inhibitor of VEGFRs 1, 2 and 3. Pfizer reported positive top-line results for axitinib vs. Nexavar in a Phase III trial in 2nd-line RCC. Previously, a Phase II trial of axitinib in kidney cancer patients who failed Nexavar treatment showed an overall response rate of 22.6%, progression free survival of 7.4 months and overall survival of 13.6 months. Importantly, a second Phase III trial comparing axitinib to Nexavar in advanced kidney cancer patients is ongoing. We believe results could be available in 2011.

Exhibit 7: Tivozanib and Axitinib Phase III Trials

Trial	AXIS (AG 013736)	AG-013736	TIVO-1
Drug	Axitinib	Axitinib	Tivozanib
Line of Therapy	2nd line	1st and 2nd line	1st line
Status	Top-line positive	Estimated data 2011	Enrollment complete Data in mid-2011

Source: Product inserts and American Cancer Society

Ultimately, we expect that drugs with the best PFS results and cleanest safety profile will dominate the market and tivozanib and axitinib could both garner significant share. We believe tivozanib could differentiate itself on the basis of efficacy, should PFS results from the Phase III trial mirror those in its Phase II trial, as well as on the basis of safety, with a rate of severe hand-foot-syndrome that was far below that of axitinib in Phase II (incidence of <1% vs. 16.1% for axitinib in their respective Phase II trials).

Potency and Selectivity Provide Competitive Differentiation – Potentially Opens Larger Markets

Tivozanib is a potent and selective inhibitor of the VEGF receptor (including VEGFR-1, -2, and -3). Unlike other commercial VEGF inhibitors (such as Nexavar, Sutent, and Votrient), tivozanib is more potent, more selective, and has a longer-half life. The off target activities of Sutent and Nexavar are a potential liability in certain tumor types where the broader spectrum of activity adds toxicity without necessarily increasing activity. In certain other tumor types such as liver cancer and GIST, these activities may be beneficial. In kidney cancer (RCC), pure VEGF inhibition has been shown to provide significant efficacy (for example Avastin – a VEGF targeted antibody).

The clinical and commercial success of Avastin in colorectal cancer, lung cancer, breast cancer, brain cancer, and ovarian cancer provide a direct proof of the opportunity for direct highly selective VEGF inhibition. Many of the small molecule inhibitors such as Nexavar, Sutent, Axitinib, and others have been unsuccessful following in Avastin's tracks in these larger indications because of their limited ability to combine with chemotherapy, and their success in other indications may be driven by their inhibition of other signalling pathways.

AVEO is in the early stages of exploring these potential blockbuster markets by running Phase I/II trials of tivozanib in combination with other commonly used agents. AVEO has already demonstrated the ability to safely administer full dose tivozanib with Taxol (breast cancer), Torisel (kidney cancer), and FOLFOX (colorectal cancer). Larger controlled trials are likely to prove successful but will need to be conducted in geographies where Avastin is not currently available.

We anticipate that with the recent financing and potentially with help from a partner in 2011, AVEO will accelerate development of tivozanib in multiple tumor types.

Exhibit 8: Multi-targeted Drugs are Not Easily Combined with Chemo to Treat the Largest Indications

Drug	Approved indication	Regimen
Nexavar	Liver cancer	Monotherapy
	Kidney cancer	Monotherapy
Sutent	GIST	Monotherapy
	Kidney cancer	Monotherapy
Votrient	Kidney cancer	Monotherapy
Avastin	Colorectal	FOLFOX, FOLFIRI
	Breast (Her2-neg)	Taxol
	Lung (non-squamous)	Carboplatin/Taxol
	Glioblastoma	Monotherapy
	Kidney cancer	Interferon

Indication	Incidence	Death
Lung	222,520	157,300
Breast	207,090	40,230
Colorectal	142,570	51,370
Kidney	58,240	13,040
Liver	24,120	18,910

	Nexavar	Sutent	Votrient	Avastin
Targets	CRAF, BRAF, Kit, FLT3, RET, VEGFR-1,-2,-3, PDGFR-b	PDGFR-a,-b, VEGFR-1,-2,-3, Kit, FLT3, CSF-1R, RET	VEGFR-1,-2,-3, PDGFR-a,-b, FGFR-1,-3, Kit, Itk, Lck, c-FMS	VEGF

Source: Product inserts and American Cancer Society

Exhibit 9: Comparison of Warnings on VEGF-Targeted Agents in RCC

Nexavar	Sutent	Votrient	Avastin
Onyx/Bayer	Pfizer	GlaxoSmithKline	Roche
PO BID	PO QD (4 wks on 2 wks off)	PO QD	IV every 2 wks (with interferon)
Warnings Listed on Prescribing Information			
Likely not related VEGF inhibition			
Hand-foot reactions	**Liver tox***	**Liver tox***	Infusion reaction
	QT prolongation	QT prolongation	
	Thyroid dysfunction	Hypothyroidism	
Likely VEGF related			
Bleeding	Adrenal hemorrhage	Fatal hemorrhage	**Hemorrhage, surgical complications***
Cardiac ischemia	LVEF decrease	Arterial thrombosis	Arterial thromboemolic events
GI perforation		GI perforation	**GI perforation***
Hypertension	Hypertension	Hypertension	Hypertension
		Proteinuria	Proteinuria
Fetal harm	Fetal harm	Fetal harm	
			Non-GI fistula

* Denotes black box warning
Source: Prescribing information

Regulatory and Commercial Strategy - Expect Partnership in 2011

Given expectations for Phase III data in mid-2011, we anticipate an NDA filing in early 2012, FDA approval around year end 2012 and first sales in early 2013. European approval will likely lag by a few months, but we do not anticipate AVEO will need to run a separate Phase III program to satisfy European regulators. We expect AVEO will seek a label similar to other agents in RCC, specifically for treatment of advanced kidney cancer.

AVEO is likely to retain commercial rights to tivozanib in the U.S. or at least structure a partnership which gives them substantial control of the asset in the U.S. To accelerate development and provide a path to market outside the U.S., we expect AVEO will sign an ex-U.S. (or global) partner for tivozanib in 2011. We believe the available Phase II data, the Phase I combination safety data and the preclinical specificity data should provide sufficient information for a potential partner ahead of the Phase III results, but for modelling purposes, we assume a partnership in second half of 2011. A deal could bring in up to $100M upfront, or potentially be more heavily weighted to development funding and back end economics. We include $80M upfront in our model in fourth quarter 2011. Either way, we would expect a partnership to be a catalyst for AVEO shares and a risk lowering event potentially ahead of pivotal Phase III data.

Worldwide (Ex-Asian) Development and Commercial Rights

Aveo licensed ex-Asian rights to develop and commercialize tivozanib from Kirin Brewery (part of Kyowa Hakko Kirin) in 2006 for $5M upfront and up to $60M in milestones. Aveo paid $10M in first quarter 2010 for the initiation of a Phase III trial and the remaining milestones are linked to regulatory events. Aveo owes a tiered royalty to Kirin ranging from the low- to mid-teens. We expect that cost of goods is in the low single digits for tivozanib, making the all in cost of goods (manufacturing plus royalties) likely in the mid-teens.

RCC - Initial Market is Highly Competitive

There are several approved agents for the treatment of RCC, and because some of these agents are approved for multiple cancer types, it is difficult to determine the exact size of the market.

Market Size. The annual incidence of kidney cancer is approximately 60,000 in the U.S., of which 80% are clear cell histology and nearly all have prior nephrectomy. This is the target population addressed in the Phase III trial for tivozanib. However, all the approved agents have a broad label for advanced kidney cancer, and we expect tivozanib to have a similar label. Approximately 15-20,000 patients are treated first-line and 10-15,000 each in the second-line and salvage settings. We estimate the number is higher in the EU at 90,000 cases.

Market Share. There are five single-agent drugs used to treat advanced kidney cancer: Afinitor, Nexavar, Sutent, Torisel, and Votrient. The first- and second-line settings are dominated by Sutent given its comparatively higher efficacy. IMS based prescription data also shows relatively high market shares for Afinitor and Votrient. Torisel is an infusion but we believe it could have a double-digit market share in advanced renal cell cancer as well. The bulk of Nexavar sales are in liver cancer, and we estimate a single digit market share for Nexavar in kidney cancer.

Treatment Guidelines. NCCN treatment guidelines recommend Sutent in the first-line setting with category 1 evidence and Nexavar with category 2A evidence for patients with clear cell histology. In patients with non-clear cell histology, both Sutent and Nexavar have category 2A evidence. Sutent and Nexavar also have similar classifications in the second-line and later settings based on NCCN guidelines (category 2A evidence following TKI treatment and category 1 evidence following cytokine therapy). As mentioned earlier, Sutent dominates the market because it has longer progression-free survival than Nexavar.

Tivozanib Market and Sales Expectations. AVEO is evaluating tivozanib against Nexavar in first-line renal cell cancer. In Phase II, Tivozanib demonstrated a PFS of 14.8 months in the same treatment setting, far better than results seen with Nexavar or even Sutent, the current market leader. Our baseline assumption is that tivozanib will have a superior PFS to both Nexavar and Sutent. Based on this expectation, we see tivozanib gaining market share in the U.S. at the expense of most or all of currently marketed agents with sales growing from $54M in 2013 to $300M in 2017. We assume a price per month of $7,000+ (annual increases of 3%) and a treatment duration of 11+ months. We conservatively estimate a lower penetration in Europe and a lower price per month with no price increases. We estimate AVEO will receive a 22% royalty on ex-U.S. (ex-Asia) sales and forecast a royalty of $7M in 2013, which grows to $54M in 2017.

Exhibit 10: Tivozanib Market Model in Kidney Cancer

US Tivozanib Build ($ in MM) - Kidney Cancer	2013E	2014E	2015E	2016E	2017E
Kidney and Renal Cancer, Incidence	67,571	70,274	73,085	76,008	79,049
% Growth	4.00%	4.00%	4.00%	4.00%	4.00%
Patients with Advanced RCC	16,893	17,568	18,271	19,002	19,762
% Advanced	25.0%	25.0%	25.0%	25.0%	25.0%
Kidney Cancer Patients on Tivozanib	**676**	**1,405**	**2,193**	**3,040**	**3,557**
Change in Patients	676	730	787	848	517
% Treated with Tivozanib	4.0%	8.0%	12.0%	16.0%	18.0%
Scenario 1: Clean win	4.0%	8.0%	12.0%	16.0%	18.0%
Scenario 2: Better but less than Sutent PFS	2.0%	4.0%	6.0%	8.0%	9.0%
Scenario 3: No different than Nexavar	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue per Month	$7,316	$7,535	$7,535	$7,535	$7,535
% Increase	3.0%	3.0%	0.0%	0.0%	0.0%
Treatment Duration (months)	11.0	11.1	11.1	11.2	11.2
US Revenue - Kidney Cancer ($ MM)	**54.4**	**117.0**	**183.4**	**255.4**	**300.2**
% Growth		115.2%	56.7%	39.3%	17.5%
EU Tivozanib Build ($ in MM) - Kidney Cancer	**2013E**	**2014E**	**2015E**	**2016E**	**2017E**
Kidney and Renal Cancer, Incidence	109,974	114,373	118,947	123,705	128,654
% Growth	4.00%	4.00%	4.00%	4.00%	4.00%
Deaths from Kidney Cancer					
Patients with Advanced RCC	27,493	28,593	29,737	30,926	32,163
% Advanced	25.0%	25.0%	25.0%	25.0%	25.0%
Kidney Cancer Patients on Tivozanib	**550**	**1,525**	**2,379**	**3,299**	**3,860**
Change in Patients	550	975	854	920	561
% Treated with Tivozanib	2.0%	5.3%	8.0%	10.7%	12.0%
Scenario 1: Clean win	2.0%	5.3%	8.0%	10.7%	12.0%
Scenario 2: Better but less than Sutent PFS	1.0%	2.7%	4.0%	5.3%	6.0%
Scenario 3: No different than Nexavar	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue per Month	$5,651	$5,651	$5,651	$5,651	$5,651
% Increase		0.0%	0.0%	0.0%	0.0%
Treatment Duration (months)	11.0	11.1	11.1	11.2	11.2
EU Revenue - Kidney Cancer ($ MM)	**34.2**	**95.2**	**149.2**	**207.9**	**244.3**
Royalty on ex-US sales ($MM)	**7.5**	**21.0**	**32.8**	**45.7**	**53.7**
% Growth			56.7%	39.3%	17.5%

Source: RBC Capital Markets estimates

Exhibit 11: NCCN Treatment Guidelines for Kidney Cancer

First-Line Treatment	
Clear Cell Histology	**Non Clear Cell Histology**
Category 1	**Category 1**
Sutent	Torisel for poor-prognosis patients
Avastin + interferon	
Votrient	**Category 2A**
Torisel for poor-prognosis patients	Torisel for selected patients of other risk groups
	Nexavar
Category 2A	Sutent
IL-2 (high dose) for selected patients	
Nexavar for selected patients	**Category 3**
	Votrient
Category 2B	Chemotherapy:
Torisel for selected patients of other risk groups	gemcitabine or capecitabine
	floxuridine or 5-FU
	doxorubicin
2nd and Later Line Treatment	
Following tyrosine kinase therapy	**Following cytokine therapy**
Category 1	**Category 1**
Afinitor	Nexavar
	Sutent
Category 2A	Votrient
Nexavar	
Sutent	**Category 2A**
	Torisel
Category 2B	
Torisel	**Category 2B**
Avastin	Avastin
Interferon or IL-2	Interferon or IL-2
Category 3	
Votrient	

Source: NCCN Treatment Guidelines

Much Larger Market Opportunities in Colon, Breast, and Lung Cancer

Kidney cancer is currently a blockbuster market with an estimated 58,240 new cases expected in the U.S. in 2010, according to the National Cancer Institute. Other markets potentially targeted by AVEO are far larger, with 2-4x the number of new cases in the U.S. every year and fewer competitors.

- **Colorectal Cancer**. According to the National Cancer Institute, there will be an estimated 142,570 cases of colorectal cancer in the U.S. in 2010 and 51,370 deaths. First-line standard of care for patients with metastatic colorectal cancer is combination chemotherapy plus Avastin.
- **Breast Cancer**. The National Cancer Institute estimates the number of new cases of breast cancer in 2010 will be 209,060 with 40,230 deaths. Surgery, radiation, and adjuvant chemotherapy provides benefit for most patients. For patients with metastatic breast cancer, the treatment typically combines a taxane with Herceptin (for Her2+ breast cancer). For Her2-negative breast cancer, Avastin has shown activity in combination with a taxane, though the benefit of Avastin in this setting is still being debated. Hormone therapy and other targeted agents are also used in other molecularly defined populations.
- **Lung Cancer**. The estimated new cases of lung cancer (non-small cell and small cell) in the U.S. are expected to be 222,520. The number of deaths in 2010 is expected at 157,300. Patients whose tumors are surgically resectable receive surgery possibly with adjuvant chemotherapy. Patients with advanced or metastatic disease are typically treated with doublet chemotherapy (carboplatin/Taxol). Avastin is approved as a first line agent in non-squamous NSCLC in combination with chemotherapy. Other targeted agents, such as Tarceva, are used as single agents in second-line or maintenance settings.

Financial Overview and Model Assumptions

- **Tivozanib Renal Cell Cancer Revenue and Royalties**. We assume U.S. and EU launches for tivozanib in 2013. We forecast U.S. sales of $54 million in 2013, which grow to $300 million in 2017. We forecast EU tivozanib sales of $34 million and royalties of $7.5 million in 2013, which grow to $244 million and $54 million, respectively, in 2017.
- **Additional Product Revenue**. We forecast sales of tivozanib in breast cancer and AV-299 in lung cancer totalling $65 million in 2016 and $150 million in 2017.
- **Expenses**. We forecast R&D expenses of $91 million in 2010 which increases to $115 million in 2013. We forecast SG&A expense of $14 million in 2010, which ramps up sharply in 2012 and 2013 ahead of and during the U.S. tivozanib launch and continues to increase thereafter. We forecast COGS totalling 15% of product sales.
- **Taxes**. As of year end 2009, AVEO's net operating loss carry forwards totalled approximately $131 million. We expect this total to continue to increase as the company will accrue losses until 2014 or 2015, according to our estimates. We model an increasing tax rate.
- **Common Stock Issuance**. Despite a forecast cash balance of $121 million at the end of 2010, we anticipate AVEO could raise capital following positive Phase III results for tivozanib in renal cancer, as well as at least one more offering prior to achieving profitability in 2015. Non-dilutive capital from partners could reduce the need for future equity raises.
- **Earnings per Share**. We forecast sustained profitability starting in 2015 with an EPS of $0.86 ($0.57 fully taxed).

Valuation: $24 Target

We arrive at our $24 price target using a sum of the parts analysis. Our P/E multiple and DCF valuation analyses arrive at a similar valuation.

Our key commercial assumptions are:

- Tivozanib is launched in the U.S. and EU in 2013 and protected in the U.S. and Europe through 2022 (plus potential patent term extension).
- Tivozanib is priced at $7,300 per month of treatment in the U.S. with an average duration of treatment of 11 months and that AVEO takes modest price increases. We assume tivozanib is priced at $5,650 in the EU, the average duration is the same as in the U.S.; however, no price increases are taken.
- Competition from other agents going generic could begin to impact tivozanib ahead of its patent expiration (Sutent – 2021, Nexavar – 2020, Votrient – 2021).
- Tivozanib for breast cancer and AV-999 for cancer are launched in 2016.

Probability Adjusted Sum-of-the-Parts Analysis – Primary Valuation Methodology

Our sum-of-the parts analysis of $24/share includes tivozanib for renal cell and breast cancer and AV-299 for non-small cell lung cancer, the DCF of its net loss carry forwards and its net cash.

- **Tivozanib for Renal Cancer ($20/share).** We value tivozanib at $20 per share using a probability adjusted peak sales based valuation methodology that evaluates three scenarios. We assume $500M in peak sales if data shows tivozanib to be a best in class agent, $200M in peak sales if tivozanib is superior to Nexavar but not as potent as Sutent, and $0 in sales if tivozanib fails to show superiority to Nexavar. We apply a sales multiple of 4.5x, which is in-line with the 2011 sales multiple for profitable biotechnology companies (range: 2-9x), and discount back five periods at 15%.
- **Pipeline Value ($9/share).** We value select programs from AVEO's pipeline including tivozanib for breast cancer at $5 per share and AV-299 for non-small cell lung cancer at $4 per share. We use a 15% discount rate, an 8 year discount period, and a 25% and 20% probability of success, respectively.
- **Financial Assets (-$4/share).** The non-operating portions of our sum-of-the-parts valuation includes $2.50/share in net cash, $1/share in the present value of NOLs, offset by an expected future four-year burn of ~($8)/share.

Exhibit 12: Sum of the Parts Valuation ($ millions, unless otherwise indicated)

Program	Stage	Ownership	Peak Sales	Sales Multiple	Discount Rate	Discount Period	Value	Prob.	Prob. Adjusted Value	Prob. Adjusted Per share
Tivozanib - RCC	Ph 3									
Best in class		100%	500	4.5	15%	5	1,119	55%	615	$16.19
Not as potent as Sutent		100%	200	4.5	15%	5	447	30%	134	$3.53
Bust		100%	0	4.5	15%	5	0	15%	0	$0.00
Tivozanib - Breast cancer	Ph 1	100%	500	4.5	15%	8	736	25%	184	$4.84
AV-299 - NSCLC	Ph 1	100%	500	4.5	15%	8	736	20%	147	$3.87
Value									**$1,080**	**$28.43**

Financials		
Cash (@ YE:10)	121.2	$3.19
Debt (@ YE:10)	(25.0)	($0.66)
Next 3 year's burn	(300.0)	($7.89)
Discounted value of 2010 NOLs	34.9	$0.92
Total NPV Sum	**(168.9)**	**($4.44)**

Summary	
Tivozanib in RCC	$20
Pipeline (incl. tivo)	$9
Net cash plus NOLs	$3
3-year burn	($8)
Total	$24

Source: RBC Capital Markets estimates

DCF Analysis - Based on Company P&L

A DCF analysis supports a $24 price target with the following assumptions: a weighted average cost of capital of 12.2%, which we adjust upwards to 15% to reflect that we are still awaiting Phase III results, and a 2% terminal growth rate. The primary revenue drivers for the DCF are tivozanib in renal cell and breast cancer and AV-299 in non-small cell lung cancer.

Exhibit 13: Company DCF Valuation ($ millions, unless otherwise indicated)

		2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	
Revenue		38.6	27.4	57.8	130.1	200.0	278.2	415.7	552.3	585.4	620.5	657.8	
Assumption: Growth (Mid-Term)			*-29%*	*111%*	*125%*	*54%*	*39%*	*49%*	*33%*	*6%*	*6%*	*6%*	
EBIT (Excludes Stock based Compensation)		(62.2)	(88.2)	(80.5)	(87.8)	(7.4)	55.9	167.9	280.0	292.7	310.3	328.9	
Assumption: Operating Margin						-6%	18%	39%	50%	50%	50%	50%	
Assumption: Tax rate	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%	
Income (Loss)		(62.2)	(88.2)	(80.5)	(87.8)	(7.4)	36.9	110.8	184.8	193.2	204.8	217.1	
Cash Flow Calculation:		**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Terminal**
Capex		(2.1)	(3.5)	(3.5)	(3.5)	(3.5)	(3.5)	(3.5)	(3.5)	(3.5)	(3.5)	(3.5)	
Change in deferred revenue		(8.6)	92.3	(23.7)	(2.2)	(27.2)	(27.2)	(14.8)	(13.6)	(10.0)	0.0	0.0	
Non-cash taxes		0.0	0.0	0.0	0.0	0.0	19.0	57.1	95.2	44.8	0.0	0.0	
Depreciation & Amortization		1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	
Working Capital Changes		(4.1)	(0.1)	(11.8)	(0.5)	(0.5)	(0.6)	(0.6)	(0.6)	(0.6)	(0.6)	(0.6)	
Stock Option Expense		4.2	8.2	10.0	11.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Total adjustments		(9.3)	98.2	(27.5)	6.2	(17.8)	1.1	51.6	91.0	44.2	9.4	9.4	
Free Cash Flow		(71.5)	10.1	(108.0)	(81.6)	(25.2)	38.1	162.5	275.8	237.4	214.1	226.4	1,776.6
Assumption: Terminal Growth	2.0%												
Assumption: Discount Rate	15.0%												
Assumption: WACC	12.2%												
Assumption: Valuation Year	2011		0	1	2	3	4	5	6	7	8	9	9
NPV			10.1	(93.9)	(61.7)	(16.5)	21.8	80.8	119.2	89.2	70.0	64.4	505.0

NPV Sum	$788.3
Current net cash	$118.6
Diluted shares (YE-2011)	37.8
Price / Share	**$23.98**

Source: RBC Capital Markets estimates

P/E Multiple Based Valuation

Our discounted P/E based analysis provides support to our primary valuation. Using the current median P/E multiple for profitable biotechs (17x) applied to our 2017 fully taxed GAAP EPS of $3.01 and discounted at 15%, this analysis supports a $22 target, which is similar to our $24 sum of the parts and DCF valuation. Upside to this valuation could come from a higher multiple, which is possible depending on the success of its pipeline and its ability to bring new drugs from research into development. The discount rate of 15% is also appropriate ahead of the Phase III data, but could be adjusted downward following further risk reduction.

Exhibit 14: P/E Multiple Based Valuation

		PE Multiple						
		14.0	15.0	16.0	17.0	18.0	19.0	20.0
	9.0%	25.15	26.94	28.74	30.54	32.33	34.13	35.93
	11.0%	22.55	24.16	25.77	27.38	28.99	30.60	32.21
Discount	13.0%	20.26	21.71	23.15	24.60	26.05	27.49	28.94
Rate	15.0%	18.23	19.54	20.84	22.14	23.44	24.75	26.05
	17.0%	16.44	17.62	18.79	19.97	21.14	22.31	23.49
	19.0%	14.85	15.91	16.97	18.03	19.10	20.16	21.22
	21.0%	13.44	14.40	15.36	16.32	17.28	18.24	19.20

Source: RBC Capital Markets estimates

Liquidity and Capital Structure - Well Funded Through 2012

Aveo is likely to end 2010 with approximately $121M ($87M at end of Q3, $56.6M in net proceeds from recent offering, and approximately $22M in Q4 cash burn). Aveo has financed the company through a combination of equity, debt, and technology/product licensing deals. Over the next 12 months, we expect Aveo will bring in substantial capital from both technology and product deals, and may also seek additional equity capital following one or more risk-lowering events (partnership and/or positive Phase III data).

Currently we estimate that Aveo has

- 35.5M shares outstanding;
- 2.4M in warrants and exercisable options;
- $25M in debt; and
- $180M in net operating losses.

Exhibit 15: Sources of Funding for AVEO

Source of capital ($MMs)	Amount
Private rounds prior to IPO	$169.60
Investors	$92.10
Corporate partners	$77.50
License fees and research funding	$118.10
Initial Public offering	$89.70
Hercules Technology loan	$25.00
Private placement	$60.80

Source: Company reports

Hercules Technology Loan

Aveo has a $25M loan from Hercules Technology. The terms of the loan include an interest rate of 11.9% (or 11.9% plus prime rate minus 4.75% - which ever is larger), interest only payments through March 2011, and fully amortized interest and principal payments for 30 months (through third quarter 2013).

AV-299 – A Wholly Owned Anti-HGF Antibody

AV-299 is an antibody that specifically binds and inhibits the activity of hepatocyte growth factor (HGF). HGF is the natural ligand for the c-Met receptor, which is a validated tumor target in lung cancer based on clinical results presented by Arqule for its c-Met inhibitor and by Roche for its c-Met targeted antibody, MetMAb. C-Met is known to be upregulated in tumors that have become resistant to EGFR inhibitors such as Tarceva, Iressa, and Erbitux. As a result, development of c-Met targeted therapies has focused on 2nd and 3rd line lung cancer, where EGFR targeted therapies are commonly used.

The three most advanced c-Met targeted therapies are:

- **ARQ-197** is a small molecule inhibitor of the c-Met kinase activity. Arqule and its partner Daiichi Sankyo are testing ARQ-197 in 2nd/3rd line non-small cell lung cancer in combination with Tarceva (Phase II reported at ASCO) and in a Phase II trial in 2nd line colorectal cancer with wild-type KRAS in combination with Erbitux and irinotecan (trial ongoing).
- **MetMAb** is an antibody targeting c-Met. Roche is developing MetMAb in combination with Tarceva in 2nd/3rd line non-small cell lung cancer (Phase II recently reported at ESMO; Phase III planning ongoing) and in combination with Avastin plus Taxol in 1st/2nd line triple-negative breast cancer (trial not yet initiated).
- **AV-299** is an antibody targeting HGF, the natural ligand for c-Met, whose expression is increased in many tumor types. Blocking HGF should have a similar effect to blocking the receptor. The approach is analogous to Avastin blocking VEGF vs. Sutent, Nexavar, or tivozamib blocking the VEGF receptor. Unlike the VEGF system, however, HGF is the only ligand for c-Met and c-Met is the only receptor for HGF. Aveo is testing AV-299 in a Phase II trial in combination with Iressa in Asians patients likely to have activating EGFR mutations.

Phase I Results Demonstrate Minimal Efficacy but Can Combine with Tarceva

Aveo previously reported data from a dose-escalation Phase I safety study of AV-299, which included an expansion cohort combining AV-299 with Tarceva. The key finding of the study is that AV-299 is very well tolerate with no obvious serious adverse events associated with the drug. Furthermore, the addition of Tarceva also did not seem to result in serious toxicity.

- **No Obvious Efficacy Signal.** Of the 37 patients dosed in the trial (from 2mg/kg to 20mg/kg), there were 13 patients with stable disease (35%). The data at the time of presentation were preliminary, so there may be more or better responses at future updates. However, it is clear that the drug alone or in combination with Tarceva is not generating numerous objective responses. This result is not surprising given that the patients in this trial were not selected for c-Met or HGF activity and they represented a diverse group of tumor types.
- **Safety Profile Is Favorable.** The most common adverse events in the trial (excluding the arm with Tarceva) were fatigue (46%), nausea (29%), headache (29%), and edema (29%). Given the lack of a dose response for these AEs it is likely that they may not have been drug related. The only adverse event that appeared more often at higher doses was hypokalemia, which may be a drug-related event. When Tarceva was added there were more cases of rash and diarrhea, as might be expected with Tarceva.

Exhibit 16: AV-299 is Safe Alone and in Combination with Tarceva – Phase I Results

Cohort	1	2	3	4	5		6
Dose of AV-299	2 mg/kg	5 mg/kg	10 mg/kg	20 mg/kg	20 mg/kg		20 mg/kg + Tarceva
# of pts	3	3	3	4	11		13
Efficacy measured by stable disease							
SD	1	3	1	2	4		2
% SD	33%	100%	33%	50%	36%		15%
Adverse events						overall	
Rash	1	1	1	1	1	21%	11
Fatigue	1	2	3	1	4	46%	2
Nausea	0	2	1	0	4	29%	3
Diarrhea	1	1	0	1	0	13%	6
Edema	1	1	0	2	3	29%	1
Hypokalemia	0	0	0	0	4	17%	4
Vomiting	0	0	0	1	3	17%	3
Headache	1	1	2	1	2	29%	0
Abdominal pain	0	1	2	0	1	17%	2

Source: Patnaik, et al.

Phase Ib/II Trial

Aveo is conducting a Phase Ib/II trial of AV-299 in combination with Iressa. The trial includes a dose escalation phase to determine the best dose of AV-299 in combination with Iressa followed by a randomized Phase II trial of Iressa plus or minus AV-299. The trial is expected to include approximately 188 patients enrolled entirely in Asia. Patients in the trial will be Asian and never smokers, and are therefore very likely to harbor an activating EGFR mutation. These patients respond best to drugs such as Iressa and Tarceva, and resistance to these agents may likely come from activation of the HGF/c-Met pathway.

Patients in the Iressa arm will be allowed to crossover to Iressa plus AV-299 if they have documented CR, PR or SD for more than 12 weeks prior to disease progression. Although the crossover will likely limit any possibility of detecting a survival advantage, it will provide very useful information on patients with well document progression on Iressa.

The Phase Ib/II trial was initiated in June 2010 and data from the Phase II portion of the trial is expected in late 2011.

Partnership with Merck Schering Dissolved

AV-299 was originally partnered with Schering-Plough in March 2007, and in September 2010, Merck gave the rights back. Originally, Schering (now Merck) had an exclusive worldwide agreement to develop and commercialize AV-299 in return for funding R&D expenses. AVEO would have been eligible to receive development and commercialization milestones exceeding $460M and royalties on product sales. Within the partnership AVEO had been primarily responsible for the Phase I and Phase II development through proof of concept, so the returned rights did not change the timeline for clinical development. Importantly, the current Phase II trial was already part of the development plan and Merck recently paid an $8.5M milestone to AVEO in June 2010 for the initiation of the Phase II trial. Merck continues to support development of the product through December 2010. The milestones, funding, and returned rights now give AVEO the opportunity to add significant value to the program and potentially repartner the asset at more favorable terms.

Potential to get a more lucrative partner. The original deal with Schering in September 2007 included only $7.5M upfront as well as an equity investment. Schering also committed to $3M/year in research funding for three years, reimbursement of clinical expenses through Phase II, and milestones for multiple indications which could total $464M.

By contrast Arqule signed two deals for its c-Met inhibitor including Asian rights to Kyowa Hakko Kirin for $30M upfront, $93M in milestones, mid-teens to low 20% royalty and ex-Asian rights for - $60M upfront, $560M in milestones, and double digit royalties. The ex-Asia deal includes a co-promote and 50/50 development expense sharing.

We believe that with Phase II results, AVEO will be able to sign a very lucrative licensing deal with retained commercial rights, a large upfront payment, and substantial royalties.

In Vivo Cancer Biology

AVEO's founding science is based on the development of valuable animal models of cancer. Most cancer research is done using transplanted tumor model systems, where a human or animal tumor is grafted onto a mouse and then treatments are tested on these very abnormal tumors. AVEO's founding scientists engineered mice strains that naturally develop tumors of various types by the introduction of transgenic oncogenes. These "naturally" occurring tumors are more "normal" and their response to treatment and other interventions provides more valuable assessment of possible therapeutic utility. These systems also provide greater genetic diversity because each tumor in the mouse develops "naturally." These models also provide a system to study the key signalling pathways in the development and maintenance of tumors.

The core technology was essential in developing AVEO's proprietary pipeline (excluding tivozanib). Each of the targets were identified as important in these model systems. In addition, the platform has served as a source of non-dilutive funding. To date, AVEO has received $118M in license fees and research funding either for the technology or for the product candidates generated by this technology.

Partnerships

- **OSI Pharmaceuticals.** AVEO is working with OSI Pharmaceuticals (now part of Astellas) to provide preclinical models and biology to support the development of small molecule drugs primarily for the treatment of cancer. The deal started in 2007, and OSI has paid $7.5M upfront, $2.5M/year in research funding, and made an equity investment. In July 2009, the collaboration was expended and OSI paid $5M plus OSI provides research funding through June 2011 and another equity investment. Under the new terms, AVEO may be eligible for $94M in milestones for each target and its associated product plus up to $27M in milestones for certain deliverables and research milestones, which are likely more near term. OSI has an option to expand the relationship further and gain a non-exclusive perpetual license to certain elements of AVEO's technology, which would require OSI to pay $25M. We expect this payment could occur in 2011.

- **Biogen.** AVEO granted Biogen an option on ex-North American clinical and commercial rights for its early-stage ErbB3-targeted antibodies for an upfront payment of $5M and an equity investment in March 2009. AVEO has already received two preclinical milestone payments of $5M each and may be eligible for one more $5M payment. If Biogen exercises its option, it will make an undisclosed payment to AVEO. The exercise payment and future regulatory milestones total $50M. If exercised, Biogen will pay a royalty to AVEO on ex-North American sales, and AVEO will pay Biogen a royalty on North American sales.

Management

Tuan Ha-Ngoc, President, Chief Executive Officer and member, Board of Directors. Mr. Ha-Ngoc has been President, CEO and a member of the board since June 2002. **Prior experience**: Co-founder, President and CEO, deNovis (1999-2002), VP, Strategic Development, Wyeth (1998-1999). **Current memberships**: Board of Directors, Human Genome Sciences, and a number of academic and non-profit organizations, including the Harvard School of Dental Medicine, the Tufts School of Medicine, the MIT Koch Institute of Integrative Cancer Research, the Boston Philharmonic Orchestra, and the International Institute of Boston. **Education**: M.B.A., INSEAD, M.A. Pharmacy, University of Paris, France.

David Johnston, Chief Financial Officer. Mr. Johnston has been CFO since October 2007. **Prior experience**: SVP, Corporate Finance, Genzyme (1998-2007). **Current memberships**: Board of Directors of Tissue Banks International. **Education**: M.B.A., University of Michigan, B.S., Washington and Lee University.

Elan Ezickson, Executive Vice President, Chief Business Officer. Mr. Ezickson has been CBO since April 2003. **Prior experience**: President, Biogen Canada, Program Executive and Associate General Counsel, Biogen (1994-2003). **Current memberships**: Board of Directors of the Greater Boston Food Bank and the Board of Trustees of the Commonwealth Covenant Fund. **Education**: J.D., Columbia University School of Law, B.A., Political Science, Yale University.

William Slichenmyer, M.D., Sc.M., Chief Medical Officer. Mr. Slichenmyer has been CMO since September 2009. **Prior experience**: CMO, Merrimack Pharmaceuticals (2007-Sep. 2009), Global Head of Oncology Clinical Development, among other roles, Pfizer. **Education**: M.D. and B.A., Case Western Reserve University, Sc.M., Clinical investigation, Johns Hopkins Oncology Center.

Michael P. Bailey, Chief Commercial Officer. Mr. Bailey has been CBO since September 2010. **Prior experience**: SVP, Business Development, and CCO, Synta Pharmaceuticals (2008-Sep. 2010), SVP of Commercial Operations, among other roles, ImClone (1999-2008), Manager of cardviovascular development portfolio, Genentech (1997-1999), several commercial roles, Smith-Kline Beecham (1992-1997). **Education**: M.B.A., University of Notre Dame Graduate School of Business, B.S., Psychology, St. Lawrence University.

Jeno Gyuris, Ph.D., Senior Vice President, Head of Research. Dr. Gyuris was named SVP and head of research in January 2010. Previously, he was VP, Molecular Technologies (2002-2007) and SVP, Drug Discovery (Jan. 2007-Jan. 2010) at AVEO. **Prior experience**: VP, Molecular Technologies, among other roles, GPC Biotech (1993-2002). **Awards/Publications**: Several research fellowships in Europe and the United States; author of numerous patents and publications. **Education**: Ph.D., University of Szeged, Szeged, Hungary.

Valuation

Our probability adjusted sum-of-the parts analysis of $24/share includes tivozanib for renal cell ($20/share), two pipeline opportunities for tivozanib in breast cancer and AV-299 for non-small cell lung cancer ($9/share), and a net negative for its cash, debt, and forecast four-year burn (-$4/share). A company DCF and P/E multiple analysis come to similar valuations.

Price Target Impediment

Our price target is dependent primarily on the clinical, regulatory and commercial success of tivozanib in renal cell carcinoma. We expect Phase III results for tivozanib in mid-2011 will show superiority to Nexavar (the direct comparator) and similar or better results compared to the market leader, Pfizer's Sutent. Any clinical, regulatory or commercial setbacks could negatively impact our valuation. Upside could come from better than anticipated market penetration, partnerships for the pipeline, and clinical success of programs not directly included in our valuation.

Company Description

AVEO Pharmaceutical is an oncology focused company developing both small molecules and antibodies against key targets in important signaling pathways. Its most advanced program tivozanib is a small molecule VEGF inhibitor in Phase III for kidney cancer. The trial is a head-to-head trial against Nexavar. Better selectivity and potency and robust Phase II results suggest likely superiority of tivozanib. Its most advanced antibody program is AV-299, an anti-HGF antibody, in Phase II development for non-small cell lung cancer. Both the Phase III for tivozanib and the Phase II for AV-299 are randomized trials with data expected in mid-2011 and late-2011 respectively.

AVEO Pharmaceuticals

Jason Kantor, Ph.D. (415) 633-8565
Michael J. Yee (415) 633-8522

Annual and Quarterly Income Statement

($ in MM; except per share)	2008A	2009A	Q1:10A	Q2:10A	Q3:10A	Q4:10E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E
Tivozanib														
U.S. Sales - RCC										54.4	117.0	183.4	255.4	300.2
EU Royalty - RCC										7.5	21.0	32.8	45.7	53.7
Tivozanib - BC													25.0	70.0
AV-299													40.0	80.0
Total Product Revenues										61.9	138.0	216.2	366.2	504.0
Collaboration revenue	19.7	20.7	10.9	15.6	6.2	5.9	38.6	27.4	57.8	68.2	62.0	62.0	49.6	48.3
Total Revenues	19.7	20.7	10.9	15.6	6.2	5.9	38.6	27.4	57.8	130.1	200.0	278.2	415.7	552.3
COGS										8.2	17.6	27.5	48.1	67.5
Research and Development Expenses	41.8	51.8	22.6	26.0	20.3	22.0	90.9	101.5	112.5	140.0	115.0	115.0	115.0	115.0
Sales, General and Administrative Expenses	9.2	10.1	2.8	3.8	3.6	4.0	14.2	19.3	31.0	75.0	80.0	85.0	90.0	95.0
Contingent Consideration														
Total Costs and Expenses	51.0	61.9	25.4	29.8	23.9	26.0	105.1	120.8	143.5	223.2	212.6	227.5	253.1	277.5
Operating Income (Loss)	(31.3)	(41.2)	(14.5)	(14.2)	(17.6)	(20.1)	(66.4)	(93.4)	(85.7)	(93.0)	(12.6)	50.7	162.7	274.7
Other income (expense), net	(0.2)	(0.3)	0.7	(0.6)	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Interest income	1.2	0.1	0.0	0.0	0.1	0.1	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.3
Other Income/(Expense), Net	(1.1)	(3.0)	0.1	(1.3)	(1.0)	(1.0)	(3.1)	(10.5)	(12.7)	(9.5)	(1.7)	(1.7)	(1.7)	(1.7)
Income (Loss) before Tax	(32.5)	(44.2)	(14.4)	(15.5)	(18.6)	(21.1)	(69.6)	(103.9)	(98.4)	(102.5)	(14.2)	49.0	161.0	273.1
Provision for Income Tax														6.8
Net Income (Loss) - GAAP	**(32.5)**	**(44.1)**	**(14.4)**	**(15.5)**	**(18.6)**	**(21.1)**	**(69.6)**	**(103.9)**	**(98.4)**	**(102.5)**	**(14.2)**	**49.0**	**161.0**	**266.3**
EPS, Diluted*	($21.07)	($27.44)	($2.27)	($0.50)	($0.60)	($0.62)	($2.73)	($2.64)	($2.03)	($1.89)	($0.26)	$0.86	$2.79	$4.56
EPS, Diluted (Fully-Taxed, GAAP)												$0.57	$1.84	$3.01
Shares Outstanding, Basic	1.5	1.6	6.3	30.8	30.9	34.0	25.5	39.4	48.5	54.2	54.8	55.3	55.9	56.5
Shares Outstanding, Diluted	1.5	3.2	7.9	33.1	33.6	36.3	27.9	41.7	50.9	56.1	56.7	57.2	57.8	58.3

Tivozanib summary	2013E	2014E	2015E	2016E	2017E
US sales	54.4	117.0	183.4	255.4	300.2
EU sales	34.2	95.2	149.2	207.9	244.3
Total sales	88.6	212.3	332.6	463.3	544.5
Revenue to Aveo	61.9	138.0	216.2	301.2	354.0

*Basic shares used to calculate diluted EPS when earnings are negative.

Source: Company reports and RBC Capital Markets estimates.

Required Disclosures

Conflicts Disclosures

The analyst(s) responsible for preparing this research report received compensation that is based upon various factors, including total revenues of the member companies of RBC Capital Markets and its affiliates, a portion of which are or have been generated by investment banking activities of the member companies of RBC Capital Markets and its affiliates.

RBC Capital Markets, LLC makes a market in the securities of AVEO Pharmaceuticals, Inc. and may act as principal with regard to sales or purchases of this security.

An analyst involved in the preparation of this report has visited certain material operations of AVEO Pharmaceuticals, Inc..

The author is employed by RBC Capital Markets, LLC, a securities broker-dealer with principal offices located in New York, USA.

Explanation of RBC Capital Markets Equity Rating System

An analyst's 'sector' is the universe of companies for which the analyst provides research coverage. Accordingly, the rating assigned to a particular stock represents solely the analyst's view of how that stock will perform over the next 12 months relative to the analyst's sector average.

Ratings

Top Pick (TP): Represents best in Outperform category; analyst's best ideas; expected to significantly outperform the sector over 12 months; provides best risk-reward ratio; approximately 10% of analyst's recommendations.

Outperform (O): Expected to materially outperform sector average over 12 months.

Sector Perform (SP): Returns expected to be in line with sector average over 12 months.

Underperform (U): Returns expected to be materially below sector average over 12 months.

Risk Qualifiers (any of the following criteria may be present):

Average Risk (Avg): Volatility and risk expected to be comparable to sector; average revenue and earnings predictability; no significant cash flow/financing concerns over coming 12-24 months; fairly liquid.

Above Average Risk (AA): Volatility and risk expected to be above sector; below average revenue and earnings predictability; may not be suitable for a significant class of individual equity investors; may have negative cash flow; low market cap or float.

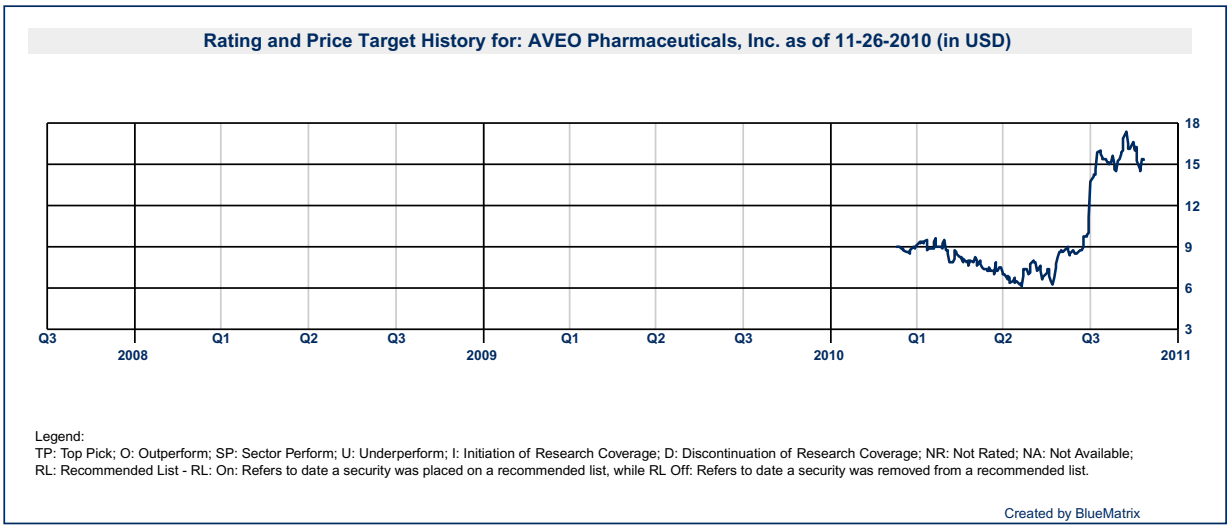
Speculative (Spec): Risk consistent with venture capital; low public float; potential balance sheet concerns; risk of being delisted.

Distribution of Ratings

For the purpose of ratings distributions, regulatory rules require member firms to assign ratings to one of three rating categories - Buy, Hold/Neutral, or Sell - regardless of a firm's own rating categories. Although RBC Capital Markets' ratings of Top Pick/Outperform, Sector Perform and Underperform most closely correspond to Buy, Hold/Neutral and Sell, respectively, the meanings are not the same because our ratings are determined on a relative basis (as described above).

Distribution of Ratings
RBC Capital Markets, Equity Research

			Investment Banking Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY[TP/O]	648	49.70	194	29.94
HOLD[SP]	597	45.80	123	20.60
SELL[U]	58	4.50	11	18.97



References to a Recommended List in the recommendation history chart may include one or more recommended lists or model portfolios maintained by a business unit of the Wealth Management Division of RBC Capital Markets, LLC. These Recommended Lists include the Prime Opportunity List (RL 3), a former list called the Private Client Prime Portfolio (RL 4), the Guided Portfolio: Prime Income (RL 6), the Guided Portfolio: Large Cap (RL 7), the Guided Portfolio: Dividend Growth (RL 8), and the Guided Portfolio: Midcap 111 (RL9). The abbreviation 'RL On' means the date a security was placed on a Recommended List. The abbreviation 'RL Off' means the date a security was removed from a Recommended List.

Conflicts Policy

RBC Capital Markets Policy for Managing Conflicts of Interest in Relation to Investment Research is available from us on request. To access our current policy, clients should refer to
https://www.rbccm.com/global/file-414164.pdf
or send a request to RBC CM Research Publishing, P.O. Box 50, 200 Bay Street, Royal Bank Plaza, 29th Floor, South Tower, Toronto, Ontario M5J 2W7. We reserve the right to amend or supplement this policy at any time.

Dissemination of Research and Short-Term Trading Calls

RBC Capital Markets endeavors to make all reasonable efforts to provide research simultaneously to all eligible clients, having regard to local time zones in overseas jurisdictions. RBC Capital Markets' equity research is posted to our proprietary websites to ensure eligible clients receive coverage initiations and changes in ratings, targets and opinions in a timely manner. Additional distribution may be done by the sales personnel via email, fax or regular mail. Clients may also receive our research via third-party vendors. Please contact your investment advisor or institutional salesperson for more information regarding RBC Capital Markets' research. RBC Capital Markets also provides eligible clients with access to SPARC on the Firm's proprietary INSIGHT website. SPARC contains market color and commentary, and may also contain Short-Term Trade Ideas regarding the publicly-traded common equity of subject companies on which the Firm currently provides equity research coverage. SPARC may be accessed via the following hyperlink: https://www.rbcinsight.com. A Short-Term Trade Idea reflects the research analyst's directional view regarding the price of the subject company's publicly-traded common equity in the coming days or weeks, based on market and trading events. A Short-Term Trade Idea may differ from the price targets and recommendations in our published research reports reflecting the research analyst's views of the longer-term (one year) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. Thus, it is possible that a subject company's common equity that is considered a long-term 'sector perform' or even an 'underperform' might be a short-term buying opportunity as a result of temporary selling pressure in the market; conversely, a subject company's common equity rated a long-term 'outperform' could be considered susceptible to a short-term downward price correction. Short-Term Trade Ideas are not ratings, nor are they part of any ratings system, and the Firm generally does not intend, nor undertakes any obligation, to maintain or update Short-Term Trade Ideas. Securities and Short-Term Trade Ideas discussed in SPARC may not be suitable for all investors and have not been tailored to individual investor circumstances and objectives, and investors should make their own independent decisions regarding any securities or strategies discussed herein.

Analyst Certification

All of the views expressed in this report accurately reflect the personal views of the responsible analyst(s) about any and all of the subject securities or issuers. No part of the compensation of the responsible analyst(s) named herein is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the responsible analyst(s) in this report.

Disclaimer

RBC Capital Markets is the business name used by certain subsidiaries of Royal Bank of Canada, including RBC Dominion Securities Inc., RBC Capital Markets, LLC, Royal Bank of Canada Europe Limited and Royal Bank of Canada - Sydney Branch. The information contained in this report has been compiled by RBC Capital Markets from sources believed to be reliable, but no representation or warranty, express or implied, is made by Royal Bank of Canada, RBC Capital Markets, its affiliates or any other person as to its accuracy, completeness or correctness. All opinions and estimates contained in this report constitute RBC Capital Markets' judgement as of the date of this report, are subject to change without notice and are provided in good faith but without legal responsibility. Nothing in this report constitutes legal, accounting or tax advice or individually tailored investment advice. This material is prepared for general circulation to clients and has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The investments or services contained in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about the suitability of such investments or services. This report is not an offer to sell or a solicitation of an offer to buy any securities. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. RBC Capital Markets research analyst compensation is based in part on the overall profitability of RBC Capital Markets, which includes profits attributable to investment banking revenues. Every province in Canada, state in the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. As a result, the securities discussed in this report may not be eligible for sale in some jurisdictions. This report is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. To the full extent permitted by law neither RBC Capital Markets nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct or consequential loss arising from any use of this report or the information contained herein. No matter contained in this document may be reproduced or copied by any means without the prior consent of RBC Capital Markets.

Additional information is available on request.

To U.S. Residents:
This publication has been approved by RBC Capital Markets, LLC (member FINRA, NYSE), which is a U.S. registered broker-dealer and which accepts responsibility for this report and its dissemination in the United States. Any U.S. recipient of this report that is not a registered broker-dealer or a bank acting in a broker or dealer capacity and that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, should contact and place orders with RBC Capital Markets, LLC.

To Canadian Residents:
This publication has been approved by RBC Dominion Securities Inc.(member IIROC). Any Canadian recipient of this report that is not a Designated Institution in Ontario, an Accredited Investor in British Columbia or Alberta or a Sophisticated Purchaser in Quebec (or similar permitted purchaser in any other province) and that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report should contact and place orders with RBC Dominion Securities Inc., which, without in any way limiting the foregoing, accepts responsibility for this report and its dissemination in Canada.

To U.K. Residents:
This publication has been approved by Royal Bank of Canada Europe Limited ('RBCEL') which is authorized and regulated by Financial ServicesAuthority ('FSA'), in connection with its distribution in the United Kingdom. This material is not for general distribution in the United Kingdom to retail clients, as defined under the rules of the FSA. However, targeted distribution may be made to selected retail clients of RBC and its affiliates. RBCEL accepts responsibility for this report and its dissemination in the United Kingdom.

To Persons Receiving This Advice in Australia:
This material has been distributed in Australia by Royal Bank of Canada - Sydney Branch (ABN 86 076 940 880, AFSL No. 246521). This material has been prepared for general circulation and does not take into account the objectives, financial situation or needs of any recipient. Accordingly, any recipient should, before acting on this material, consider the appropriateness of this material having regard to their objectives, financial situation and needs. If this material relates to the acquisition or possible acquisition of a particular financial product, a recipient in Australia should obtain any relevant disclosure document prepared in respect of that product and consider that document before making any decision about whether to acquire the product.

To Hong Kong Residents:
This publication is distributed in Hong Kong by RBC Investment Services (Asia) Limited and RBC Investment Management (Asia) Limited, licensed corporations under the Securities and Futures Ordinance or, by Royal Bank of Canada, Hong Kong Branch, a registered institution under the Securities and Futures Ordinance. This material has been prepared for general circulation and does not take into account the objectives, financial situation, or needs of any recipient. Hong Kong persons wishing to obtain further information on any of the securities mentioned in this publication should contact RBC Investment Services (Asia) Limited, RBC Investment Management (Asia) Limited or Royal Bank of Canada, Hong Kong Branch at 17/Floor, Cheung Kong Center, 2 Queen's Road Central, Hong Kong (telephone number is 2848-1388).

To Singapore Residents:
This publication is distributed in Singapore by RBC (Singapore Branch) and RBC (Asia) Limited, registered entities granted offshore bank status by the Monetary Authority of Singapore. This material has been prepared for general circulation and does not take into account the objectives, financial situation, or needs of any recipient. You are advised to seek independent advice from a financial adviser before purchasing any product. If you do not obtain independent advice, you should consider whether the product is suitable for you. Past performance is not indicative of future performance.